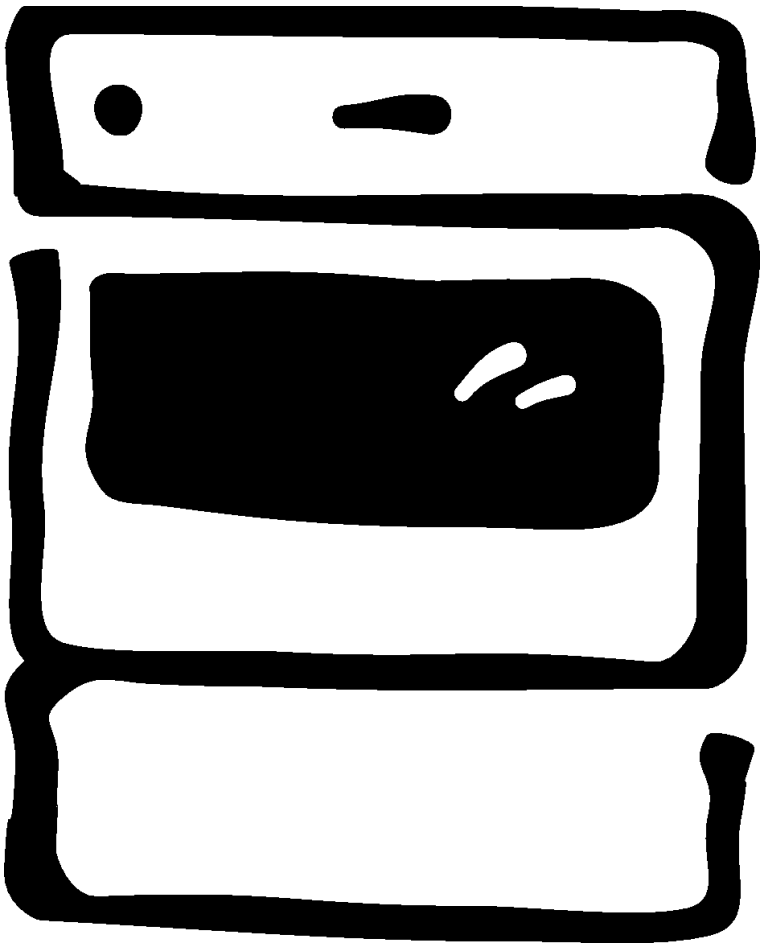
Electrolux

SERVICE MANUAL

COOKERS



Euro Steam Cooker

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Contents

1. General features 3
1.1 Models 3

2. Appliance data 4
2.1 Dimensions and capacities 4

3. Control elements 5

4. Component data 6
4.1 The electronic oven control (WOEC – control unit) 6
4.2 Power supply / relay board 8
4.3 The steam thermostat / relay steam 9
4.4 Actuators 10
4.5 The temperature sensor PT 500 / buzzer / devaporization opening / safety thermostat 11
4.6 Steam generator / - cover / fan cover 12

5. Operation of setting and control units 13
5.1 Operation of the WOEC oven control 13
13
5.1.1 Setting the time of day 13
13
13
5.2 Setting the oven functions 14
5.3 Heatable drawer 24

6. Technical equipment / general information 25
6.1 Fan after-running / appliance cooling 25
6.2 Setting time 4 seconds 25
6.3 Safety switch-off of the oven 25

7. Fault diagnosis / What to do when ...? 26
7.1 Problems when baking 26
7.2 Measures in case of malfunctions 26
7.3 Service test 27

8. Technical information / wiring diagrams 32
8.1 Electrolux Therma, 230 V, without drawer heating 32
8. Technical information / wiring diagrams 32
8.1 Electrolux Therma, 230 V, without drawer heating 32
8.2 Electrolux Therma, 230 V, with drawer heating 33
8.3 Husqvarna, 230 V, with oven lights which can be switched off separately 34
8.4 Electrolux Therma, 400 V, with drawer heating 35
8.5 Description of function 36

9. Service information 37
9.1 Removing the two-part casing cover 37
9.2 Disassembly of switch panel 37
9.3 Disassembly of WOEC control unit 39
9.4 Disassembly of power supply 40
9.5 Disassembly of steam generator 41
9.6 Disassembly of temperature sensor / steam thermostat 47
9.7 Further information 49
9.8 ESD – electrostatic discharge and its effect on the control 49

1. General features

1.1 Models

Marke	Modell	PNC
Electrolux	EOB998w	941 047 059
Electrolux	EOB998k	941 047 060
Electrolux	EOB998x	941 047 061
Electrolux	EBSL7TC.3	944 211 967
Electrolux	EBSL7TC.3	944 211 968
Electrolux	EBSL7TC.3	944 211 969
Electrolux	EBKSL7TC.3	944 211 970
Electrolux	EBKSL7TC.3	944 211 971
Electrolux	EBKSL7TC.3	944 211 972
Electrolux	EBSL70TC.3	944 211 973
Electrolux	EBSL70TC.3	944 211 974
Electrolux	EBSL70TC.3	944 211 975
Electrolux	EBKSL7GTC.3	944 270 000
Electrolux	EBKSL7GTC.3AL	944 270 001
Electrolux	EBSL7GTC.3	944 270 002
Electrolux	EBSL70GTC.3	944 270 004
Electrolux	EBSL70GTC.3AL	944 270 005
Husqvarna	QCE541W	941 047 056
Husqvarna	QCE541K	941 047 057
Husqvarna	QCE541X	941 047 058
Therma	BOKD.2ST	944 211 796
Therma	BOKD.2ST	944 211 797
Therma	BOKD.2ST	944 211 798
Therma	BOD/60.2ST	944 211 799
Therma	BOD/60.2ST	944 211 800
Therma	BOD/60.2ST	944 211 801
Therma	BOD.2ST	944 211 879
Therma	BOD.2ST	944 211 880
Therma	BOD.2ST	944 211 881

2. Appliance data

2.1 Dimensions and capacities

Built-in ovens 55 cm

Outside dimensions

Height	59.5 cm
Width	54.8 cm
Depth	56.7 cm
Depth with open door	100.2 cm
Total weight, net	45.0 kg

Oven inside dimensions

Height	31.5 cm
Width	40.8 cm
Depth	40.6 cm
Capacity	52.0 l

Built-in ovens 60 cm

Outside dimensions

Height	59.4 cm
Width	59.2 cm
Depth	56.7 cm
Depth with open door	100.9 cm
Total weight, net	47.0 kg

Oven inside dimensions

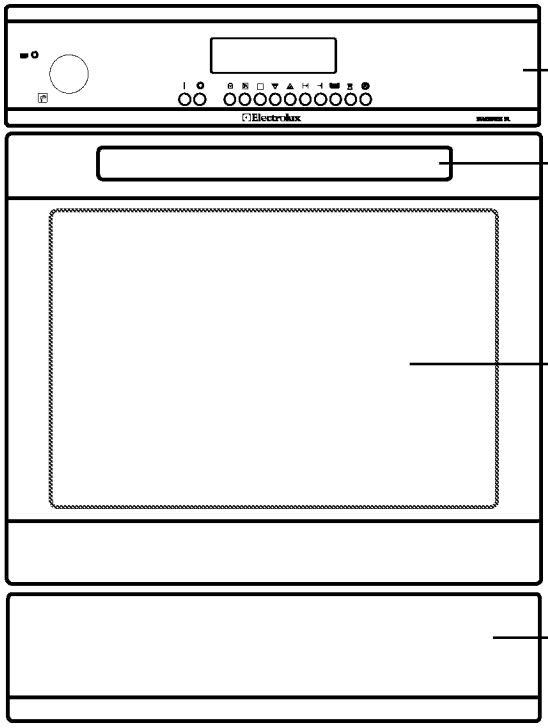
Height	31.5 cm
Width	40.8 cm
Depth	40.6 cm
Capacity	52.0 l

Power absorption

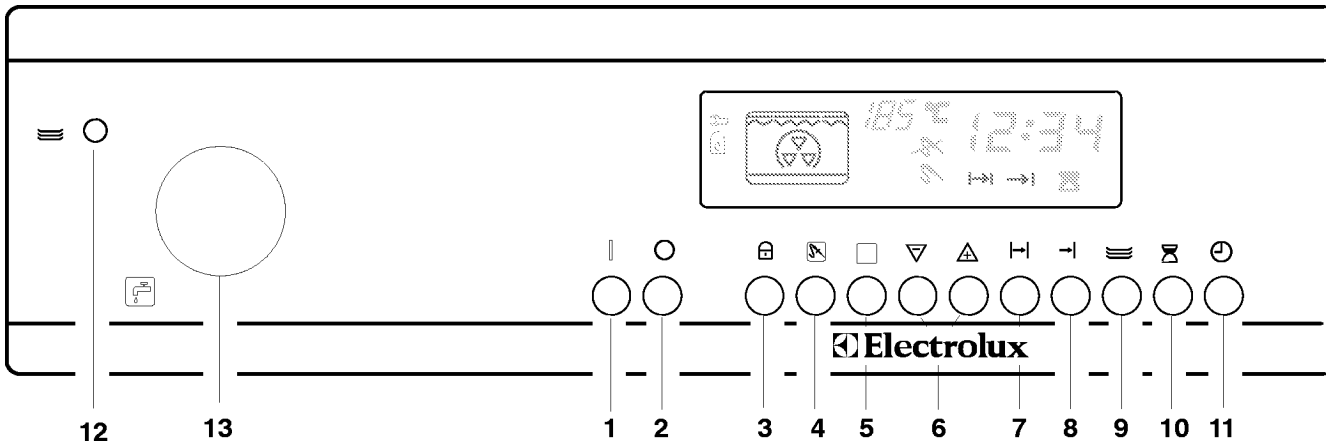
Upper heat	1,000 W
Lower heat	1,000 W
Backplate heating element (hot air)	2,400 W
Pizza level	3,400 W
Steam generator	1,800 W
Small area grill	1,900 W
Large area grill	2,900 W
Turbo grill	1,900 W
Drawer heating (appliances with heated drawer)	500 W

3. Control elements

Built-in ovens


control panel with electronic timer
oven door handle
oven door with front pane of solid glass
drawer (only in appliances with heatable drawer)

Control panel



Touching keys for functions

1	ON
2	OFF
3	child lock
4	meat probe heating
5	oven functions
6	+/- setting for temperature and time
7	cooking duration
8	switch-off time
9	drawer heating
10	timer / minute minder
11	time of day
12	pilot lamp drawer (only in appliances with heatable drawer)
13	water drawer
14	hot plate controller, front right
15	water drawer

The touching keys for functions are designed as push buttons with rubber caps in all appliances of the brand Therma. With all other appliances from the list of models (chapter 1.1), these keys are designed as touch-sensor keys.

4. Component data

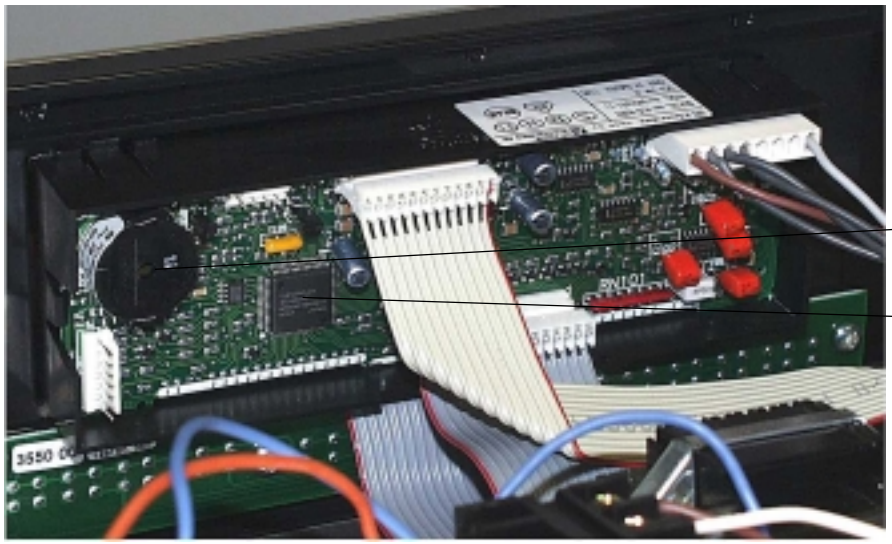
4.1 The electronic oven control (WOEC – control unit)

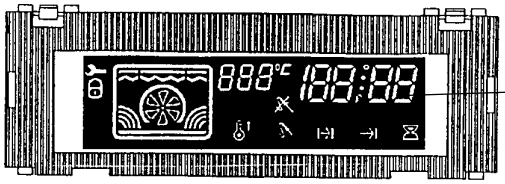
The WOEC central unit consists mainly of display, buzzer, temperature limiter /thermostat ? and microprocessor.

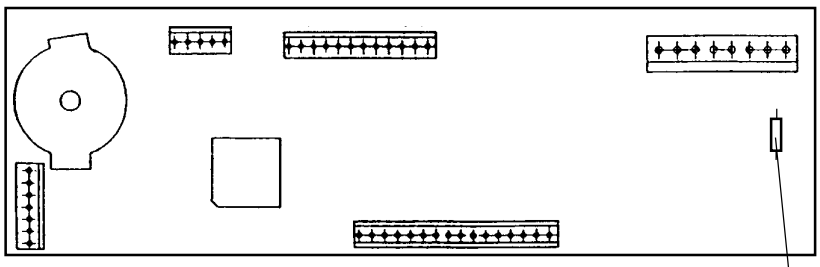
This control, which

- o regulates the set temperature via the oven sensor,
- o possibly switches off the food thermometer,
- o is set by the two bit generators and the short-stroke keys,

selects the relay board.



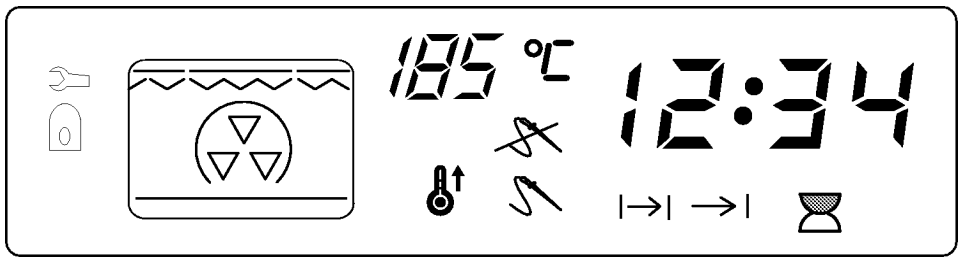




Temperature limiter (colour red)

temp.	>= 105 °C	oven switches off
temp.	>= 85 °C	cooling fan switches on
temp.	<= 80 °C	cooling fan switches off

The electronic oven control
The display area



Symbols

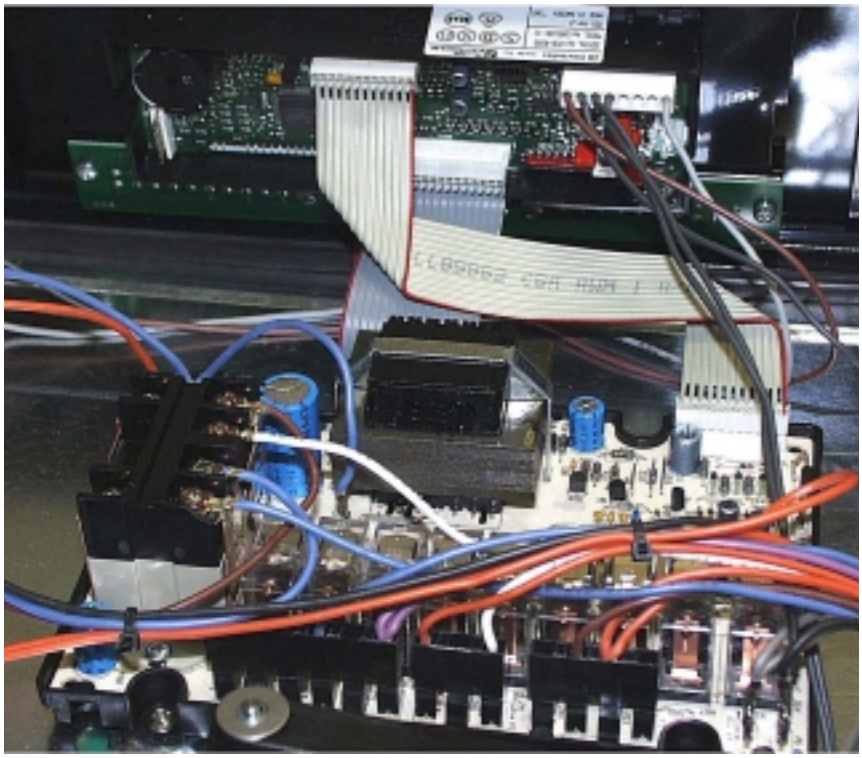
- service
- child lock
- oven functions
- oven temperature
- heating phase
- meat probe cannot be used
- meat probe
- cooking duration
- cooking end
- timer/minute minder

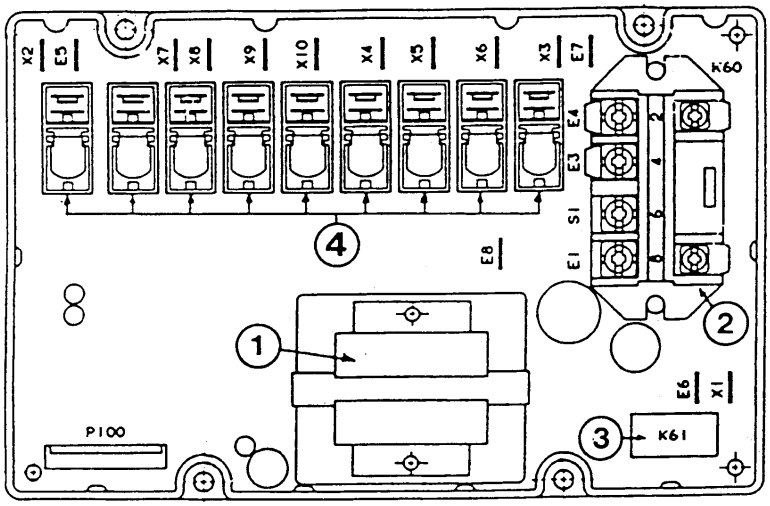
4.2 Power supply / relay board

This board consists of a number of relays, a transformer (1) and other components, which are necessary for the power supply of the relays and the control board.

The safety relay (2) is a power relay with 20 A contacts and serves the protection of the power circuit. This board receives the electrical control impulses transferred by the control board, and, according to the impulses received, the concerned heating element resp. ventilator is powered. The secondary relay circulating air is a service resp. secondary relay with a lower amperage (3 A at the contacts), which selects the circulation fan (3).

The control relays (4) (max. 16 A at the contacts) select the different heating elements resp. the fan; their number changes depending on the type of appliance.



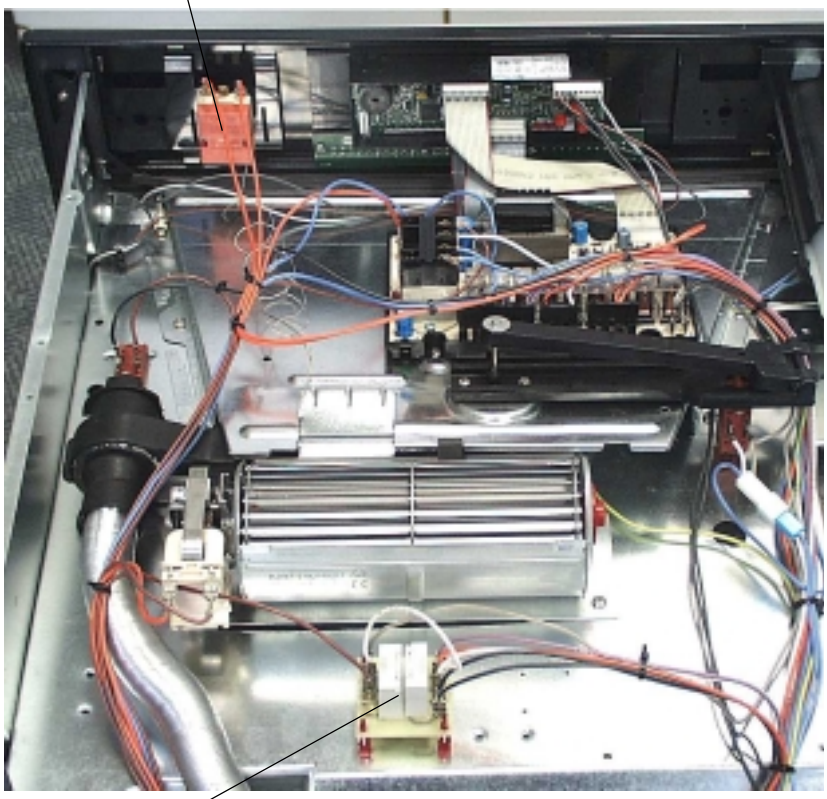


1 transformer for low voltage power supply
2 main switch-off relay (safety relay)
3 secondary relay, circulation fan
4 supply relay for heating element and hot-air fan (control relay)

4.3 The steam thermostat / relay steam

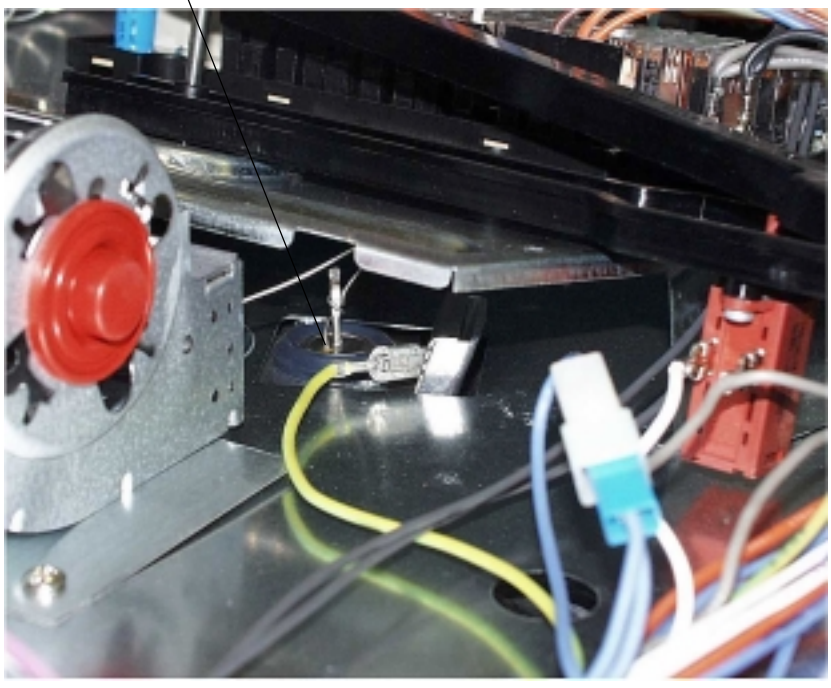
The cooking temperature with steam cooking is between 96 °C and 97 °C. The temperature fluctuations are lower than 1 °C. It is measured by the steam thermostat and maintained automatically by the electronic, in which the steam generator (chapter 4.6) is switched on resp. off.

steam thermostat



relay steam – switching on resp. off of actuators (see principle diagram chapter 8.1 and actuators chapter 4.4)

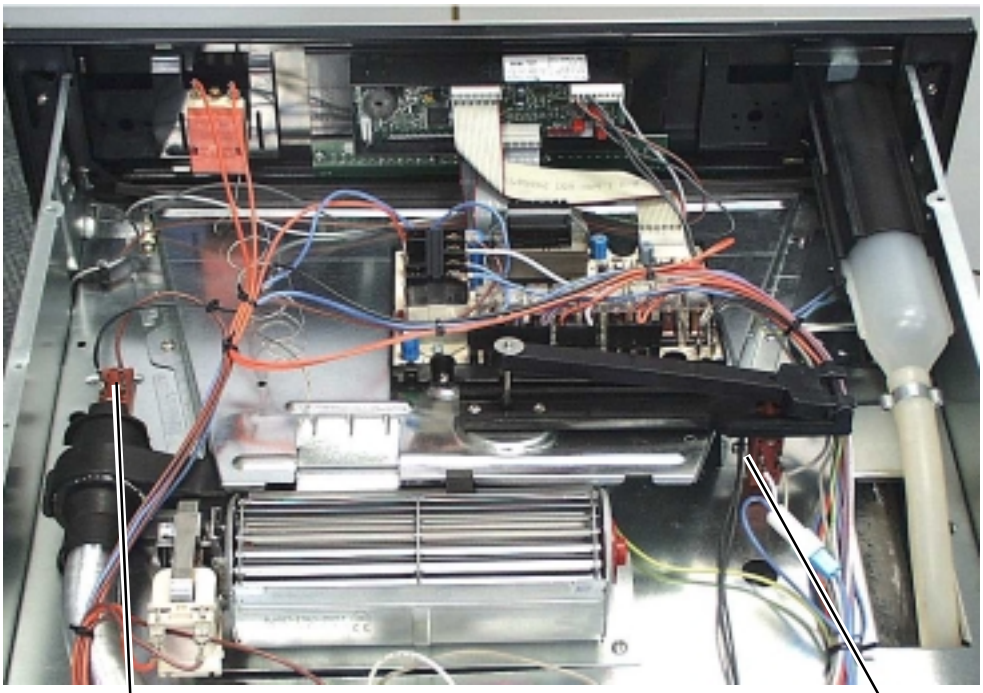
position of the temperature sensor



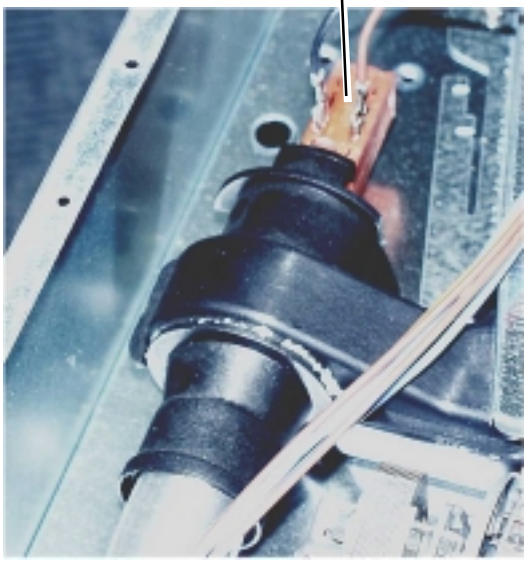
4.4 Actuators

Depending on the set function, the actuators open or close the devaporization valve and the water vapor valve (see table below).

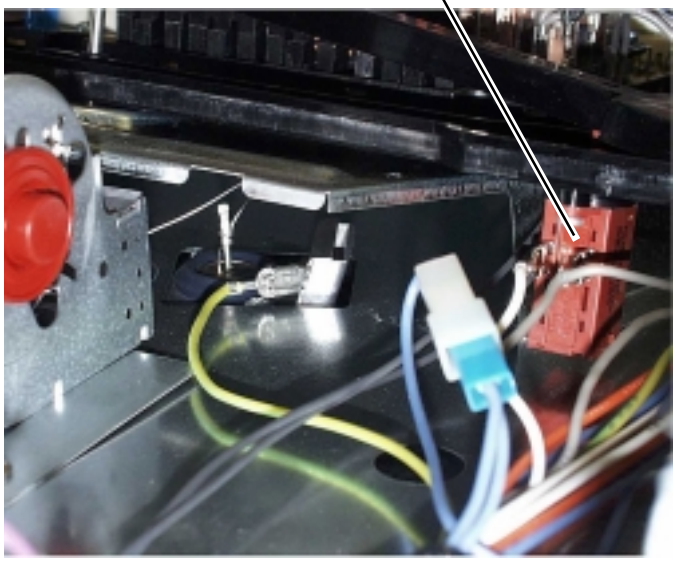
total view



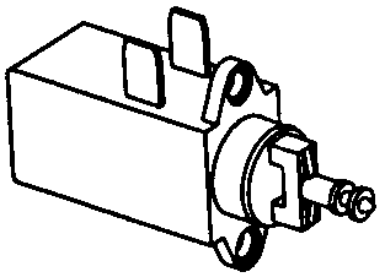
They are selected by both relays steam.



devaporization valve



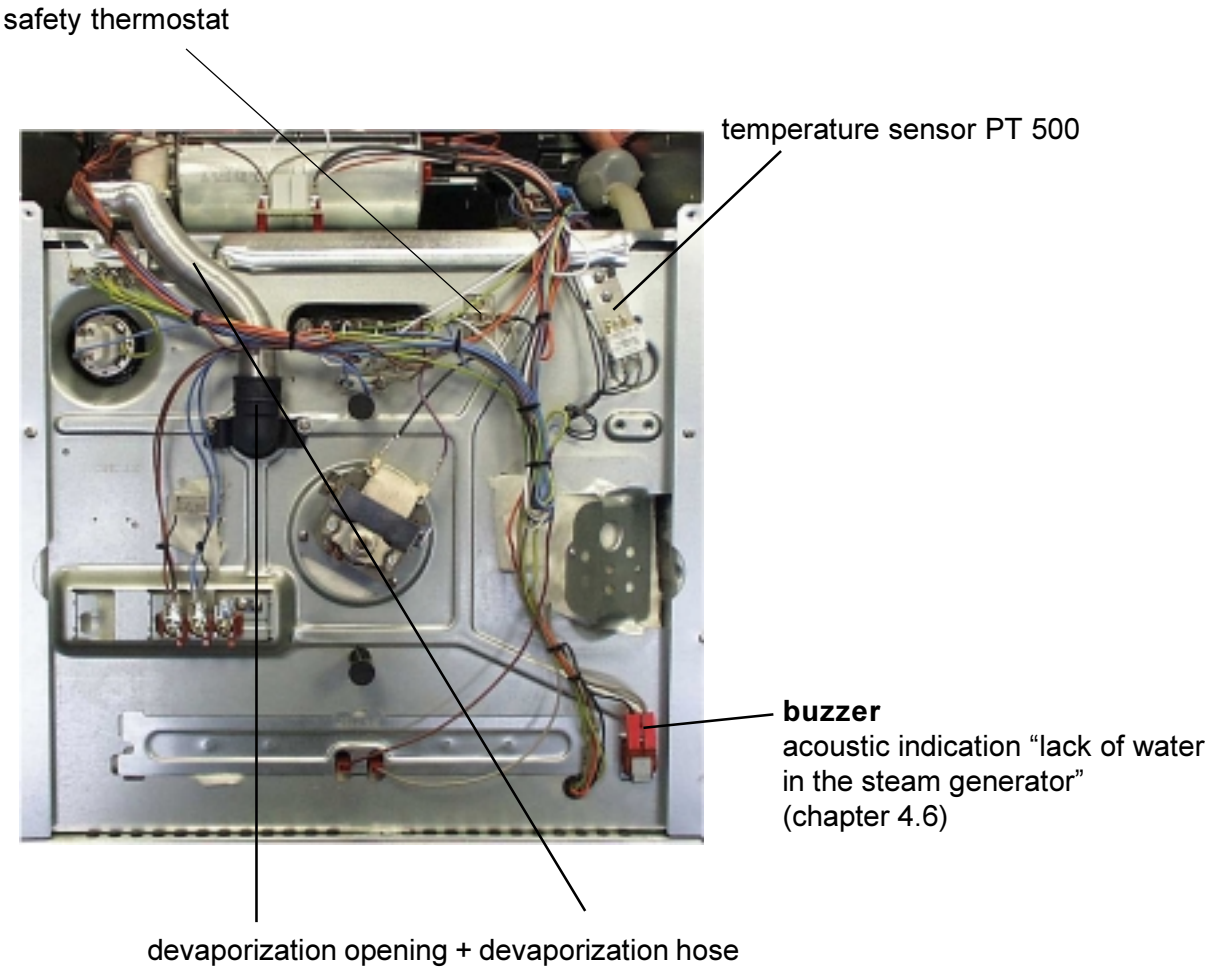
water vapor valve



	devaporization valve	water vapor valve
steam cooking	closed	closed
Edevaporization	open	open
conventional	closed	open

The stroke is approx. 6 mm. The “zero” position of the ram (0V) is the extended state.

4.5 The temperature sensor PT 500 / buzzer / devaporization opening / safety thermostat


safety thermostat
temperature sensor PT 500
buzzer
acoustic indication “lack of water in the steam generator” (chapter 4.6)
devaporization opening + devaporization hose

Sound level: 75 dB(A)

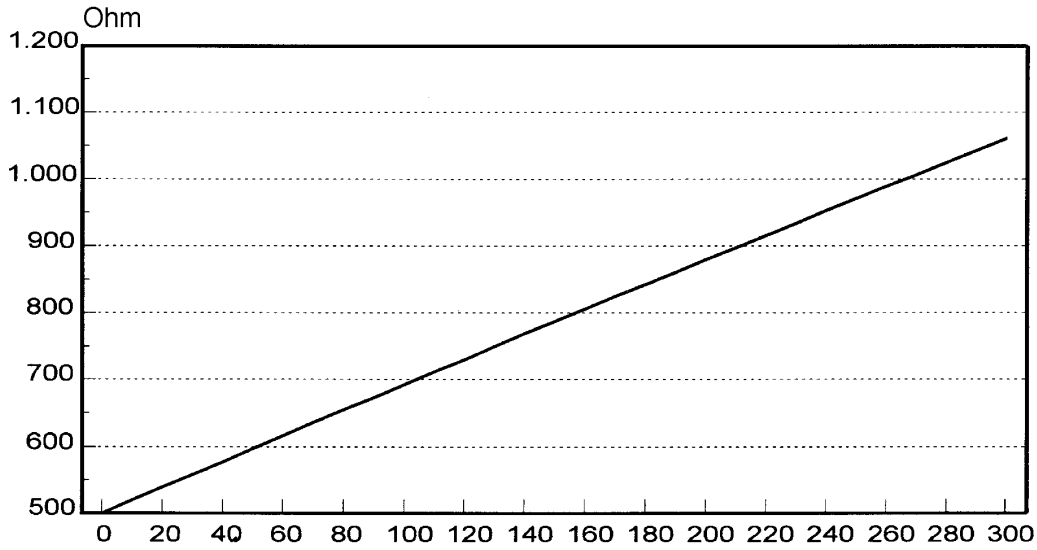


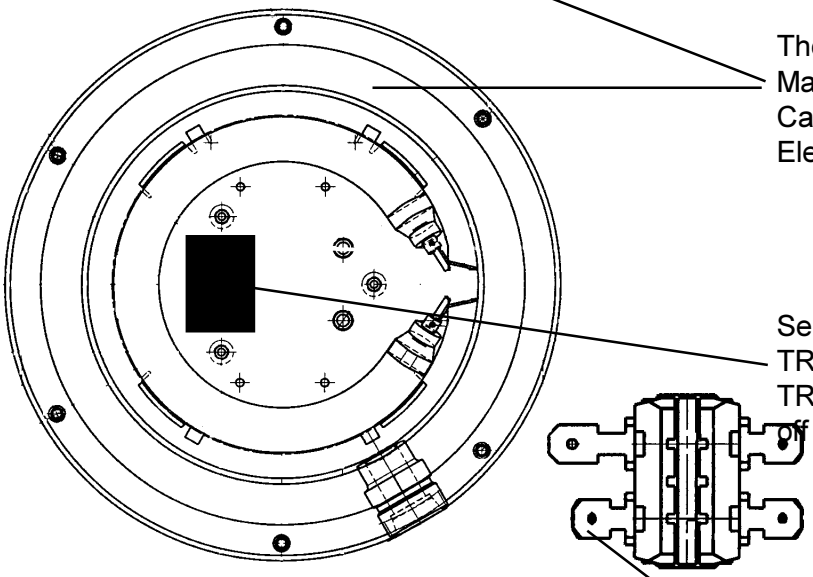
Fig.: Electrical resistance of the sensor depending on the ambient temperature

4.6 Steam generator / - cover / fan cover

The fan cover
Material: chromed brass

The steam generator cover
Material: chrome steel

The cover prevents the steam generator from soiling.



The steam generator
Material: stainless steel
Capacity: 0.7 l
Electric power: 1,800W

Seat for 2 thermo sensors (Klixons)
TR1/ F2: 120 °C signal sound lack of water
TR2/ F2: 200 °C steam generator switches off

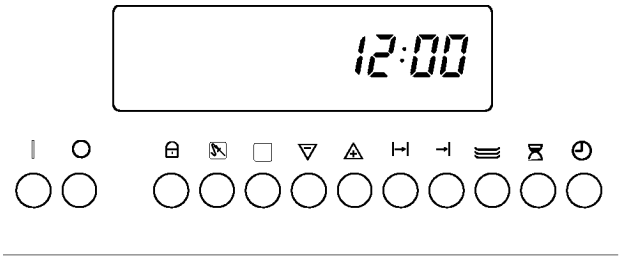
200 °C Klixon
The 200 °C Klixon can be recognized by the unilaterally bent-up tag.

5. Operation of setting and control units

5.1 Operation of the WOEC oven control

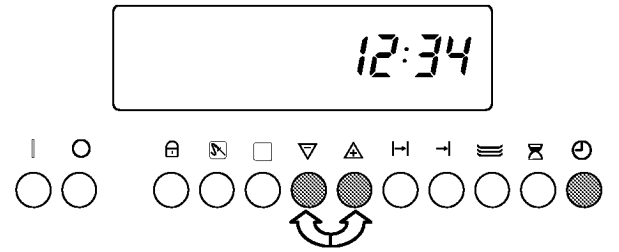
5.1.1 Setting the time of day

After connecting the power supply, “12:00” flashes in the display.



Wait until the display indicates 12:05.

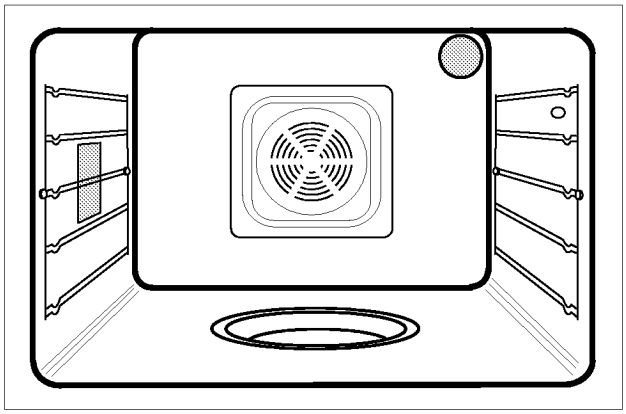
1. Press key ◴ for a short time. The digits 12 00 light, “:” is flashing between the digits.
2. Set the current time of day within 4 seconds using the key ▵ or ▿. Otherwise, please press the key ◴ anew for a short time.



After 4 seconds the flashing signal goes out. Thus the time of day is fixed.

In order to correct the time (e.g. summer/winter time), press key ◴ and change the settings by key ▵ or ▿. In this case the signal sound is without meaning.

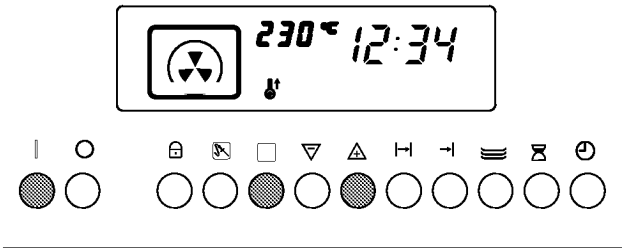
5.1.2 First cleaning



Remove all objects out of the oven as well as possibly existing stickers and protective foils at the appliance. Do not remove the nameplate! To remove possible traces from production, clean the oven before the first use. Wash and dry oven, control panel and oven door with a cloth that is moistened with some washing-up water. In doing so, the oven lighting can be switched on.

Press key ⏽.

5.1.3 First heating



The oven must be heated once before the first use. Please take care of a good room ventilation.

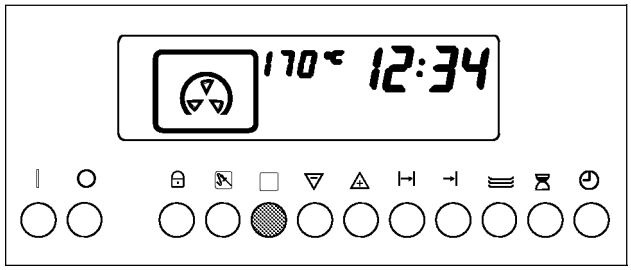
1. Switch on the oven with key ⏽.
2. Select the function hot air with key □ by tapping it repeatedly.
3. Set 230 °C with key ▵.

Operate the closed oven at this temperature for approximately 60 minutes.

4. Switch off the oven with key ○.

5.2 Setting the oven functions

By tapping the key □ repeatedly it is possible to select the oven functions. The order of functions corresponds to the representation listed below.



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Lighting
Separate setting e.g. for cleaning or preparation of cooking processes and switched on with all functions

Steam cooking
Steam generator, fixed setting 96 °C.

Interval cooking
Hot air 75% and steam generator 25% in change, pre-setting 180 °C

Hot air
Backplate heating element and oven fan
pre-setting 170 °C

Pizza level
pre-setting 230 °C

Turbo grill
Small area grill with oven fan pre-setting 180 °C

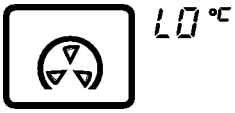
Small area grill
Grill heating element
pre-setting 230 °C

Large area grill
Upper heat and grill heating element
pre-setting 230 °C

Upper / Lower heat
pre-setting 200 °C

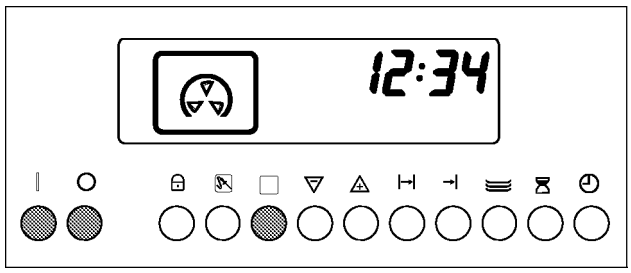
Drying
Lower heat with oven fan
pre-setting 40 °C

Low temperature cooking
Backplate heating element with oven fan
fixed setting 120/80 °C



Switching on/off the oven

1. Switch on the oven with key ▯.
   Before setting function, temperature and time, you must always press key ▯. Except: timer



A short 3-fold signal sound indicates an error in setting. In this case press key ○ and start anew with key ▯. Oven function and temperature are switched on with the electronic control and switched off manually at the desired time with key ○ or automatically according to the time programme.

2. Switch off the oven with key ○.

Setting the oven function

The functions steam cooking, interval cooking, hot air, pizza level, grill levels and upper/lower heat can be used alternatively for different dishes.

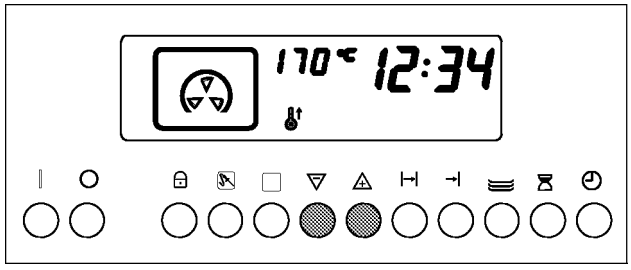
- Select the intended function by tapping key □ repeatedly. The symbol for the set function is indicated in the display.

A practice-oriented temperature is assigned to every function. If you do not change the temperature, the function switches on after 4 seconds.

Oven temperature

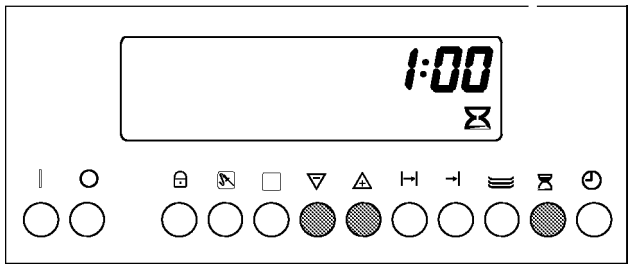
By setting a function, the display indicates the temperature pre-setting.

- Set a temperature between 40 and 230 °C with the △ or ▽ key. The selected temperature keeps to be indicated in the display. With the functions hot air, pizza level and upper/lower heat, the symbol “heating phase” lights.



When the temperature has been reached, a signal sound can be heard and the symbol “heating phase” goes out.

Timer/Minute minder



The timer can be used to observe and check cooking durations and procedures in the kitchen, even independent of the oven. It also can be set at the same time with automatic timings. In this case the display shows the timer setting, whereas the automatic settings are running.

1. Press key ⧖. The timer symbol ⧖ and the time indication :00 are flashing in the display.
2. You can set timings from 1 minute to 9 hours 59 minutes using keys ▲ or ▽.

Approximately 4 seconds after setting, the timing starts, the timer symbol ⧖ lights and the current time is indicated. A 3-fold signal sounds points to the run-down setting. The timer symbol ⧖ is flashing and the signal sound is repeated every 15 seconds. It can be set off by pressing key ⧖. After 2 minutes the signal sound goes out automatically.

Automatic programmes

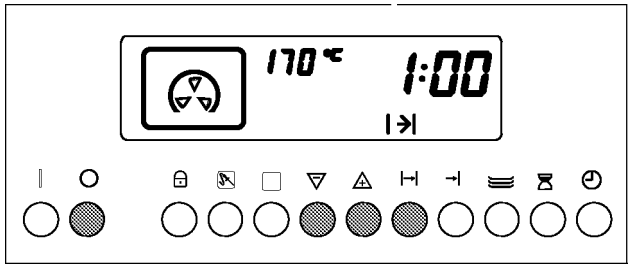
Important!
Before setting the automatic programmes you have to select function and temperature, otherwise it is not possible to do any time settings for the automatic run.

Switch-off automatic

The programmes cooking duration and switch-off time start immediately (current time) with the process of setting and end with the set time. The oven is on from the time of setting until the switch-off time.

Setting the cooking duration

1. Press key |→|. The display shows 00, ":" and the symbol |→| are flashing.
2. Set the desired cooking duration using keys ▲ or ▽.



For the cooking duration you can set times between 1 minute and 9 hours 59 minutes.
The display shows the remaining cooking duration and the symbol |→| lights.

Example:
Current time 11.15,
preparation time 45 minutes.

- Press key |→| and set 00.45 using the keys ▲ or ▽, the oven is operating for 45 minutes.

Corrections:

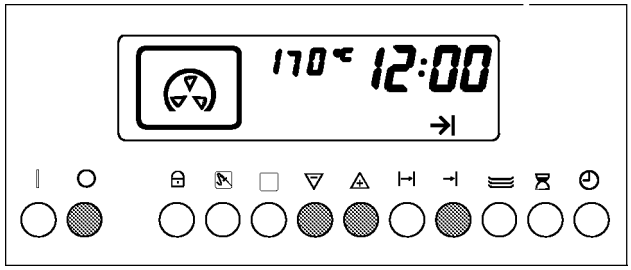
- Press key |→| and change the cooking duration as intended using the keys ▲ or ▽.

A 3-fold signal sound reports the end of the cooking process. The display now shows again the time of day and the symbol for the selected function is flashing.

Until the oven switches off automatically, a signal sound is repeated every15 seconds, approximately for 2 minutes.

- Switch off signal sound and oven with key ○.

Setting the switch-off time



1. Press key →|. The display shows the current time of day, ":" and the symbol →| are flashing.
2. Set the desired switch-off time using the keys ▲ or -.

The switch-off time cannot be set beyond 24 hours. The display shows the switch-off time and the symbol →| lights.

Example:
Current time 11:15,
the dish should be ready by 12.00.

- Press key →| and set 12.00 using the keys ▲ or ▽, the oven is in operation until 12.00.

Corrections:

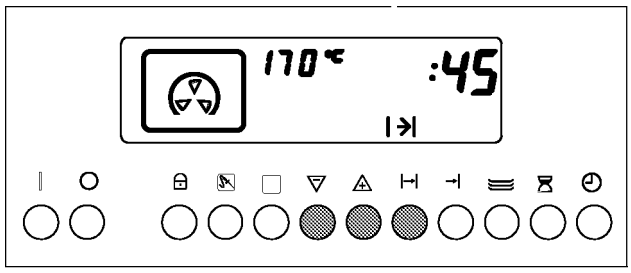
- Press key →| and change the switch-off time as intended using the keys ▲ or ▽.

A 3-fold signal sound reports the end of the cooking process. The display now shows again the time of day and the symbol for the selected function is flashing. Until the oven switches off automatically, a signal sound is repeated every 15 seconds, approximately for 2 minutes.

- Switch off signal sound and oven with key ○.

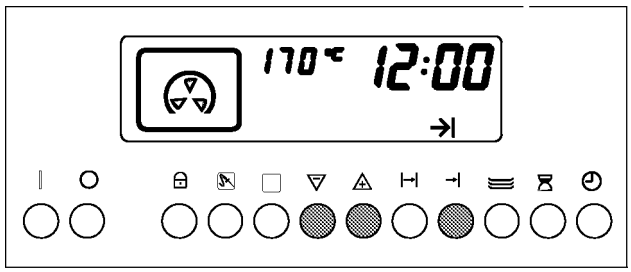
Switch-on and –off automatic

Programming, which switches on the oven automatically at a later time and switches the oven off again automatically after the cooking duration has run down.



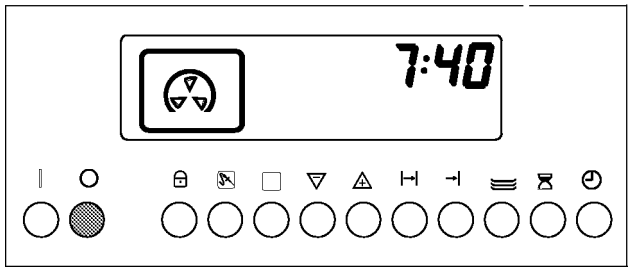
1. Press key |→|. The display shows 00, ":" and the symbol |→| are flashing.
2. Set the desired cooking duration using the keys ▲ or ▽
3. Now press key →|.
4. Set the desired switch-off time using the keys ▲ or ▽.

Example:
Current time 7.30.
Preparation time 45 minutes,
the dish should be ready by 12.00.



- Set 00.45 using key |→| and keys ▲ or ▽,
- and 12.00 using key →| and ▲ or ▽.

The oven switches on automatically at 11.15 (12.00 minus 00.45) and off again automatically at 12.00.



- The display shows the switch-off time, ":" and the symbol →| are flashing.

After 4 seconds oven function and lighting are switched off, the display shows the symbol of the selected function without frame, the current time of day and the symbols |→| and →|.

When the oven switches on automatically with the desired function, the symbol in the display goes out and the remaining cooking duration is indicated.

Check:

- By pressing key |→| you can check the set cooking duration and with key →| the switch-off time in the display.

Correction:

- Press key |→| or key →| and change the cooking duration or switch-off time as intended using the keys ▲ or ▽.

A 3-fold signal sound reports the end of the cooking process. The display now shows again the time of day and the symbol for the selected function is flashing.

Until the oven switches off automatically, a signal sound is repeated every 15 seconds, approximately for 2 minutes.

- Switch off signal sound and oven with key ○.

Steam-cooking programmes

Important!
The steam-cooking programmes must be set by the automatic programme cooking duration or switch-off time.

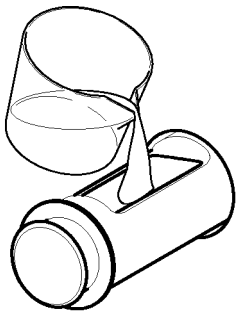
Due to the automatic approx. 5-minute devaporization at the end of the cooking duration and due to the heating time of approx. 2 minutes, settings below 10 minutes have little effect.

During the devaporization the door can steam up easily.

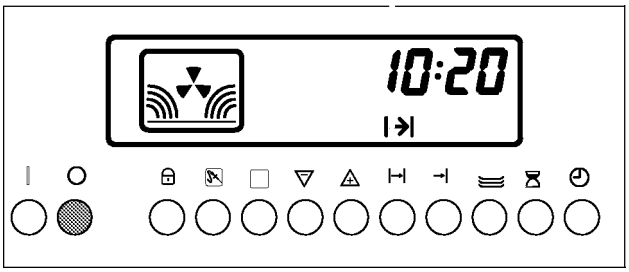
During steam operation use only the grates.

When opening the door, steam is still escaping from the hot dishes. The slight steam on the control panel will disappear after a short time.

To prevent the accumulation of lime, you can use decalcified water, e.g. from a commercial water filter appliance.



Important!
Use only water.



When the water has been used up, a buzzer will sound. Shortly after refilling water, the buzzer goes out again.

Steam cooking

1. Fill in water (approx.0.7 litres) into the water drawer in the control panel, not directly into the steam generator. The water is sufficient for approx. 30 minutes.
2. Switch on the oven with key ⏽.
3. Select the function steam cooking with key □.
4. Press key |→| or key →| and set the desired cooking duration resp. switch-off time using the keys ▵ or ▿.

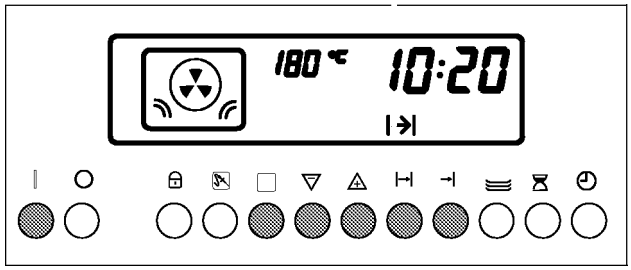
After approximately 2 minutes the first steam can be seen. A simple signal sound indicates when the cooking temperature of approx. 96 °C have been reached. A 3-fold signal sound reports the end of the cooking duration.

5. Switch off signal sound and oven with key ○.

- After the oven has cooled down, absorb the remaining water with a sponge and afterwards possibly re-wipe it with some drops of vinegar.

That the oven can dry completely, leave the oven door open approx. 2 cm (jam a wooden scoop in).

Interval cooking



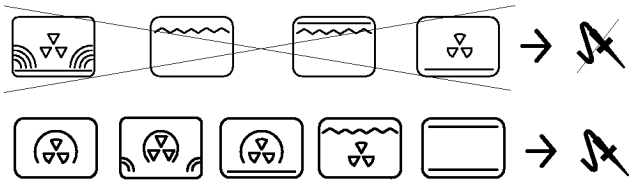
The permanent change from 75% hot air to 25% steam goes automatically.

1. Fill approx.0.7 litres water into the water drawer in the control panel. The water storage is sufficient for approx. 1 hour.
2. Switch on the oven with key ▯.
3. Select the function interval cooking with key □ and set the intended temperature using the keys ▲ or .
4. Press key |→| or key →| and set the desired cooking duration resp. switch-off time using keys ▲ or ▽.

Proceed as with steam cooking.

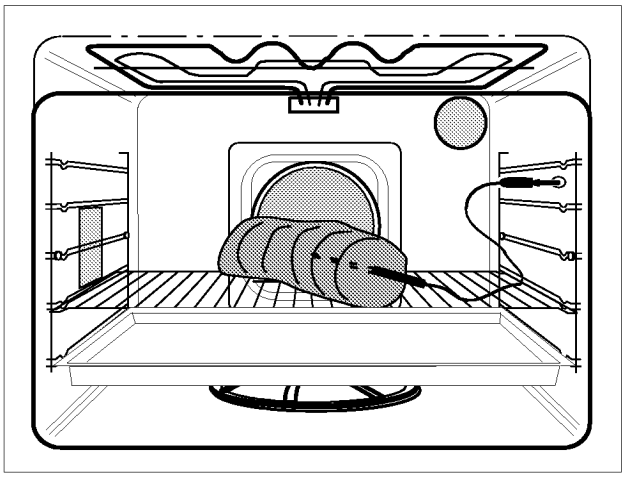
Meat probe

Cooking with the core temperature automatic



The meat probe is to measure the temperature in the core of the dish during cooking. When the set temperature has been reached, the oven will switch off automatically.

1. Put the tip of the meat probe in the centre of the thickest part of the cooking food and put baking sheet, frying dishes or grill grate into the oven,
2. Put the connector of the meat probe up to the handle into the plug-in jack in the right sidewall of the oven and close the oven.

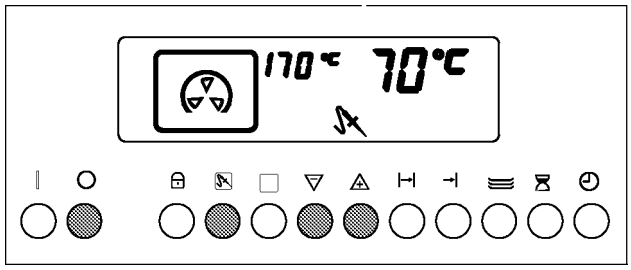


The display shows the symbol .

3. After you have set function and oven temperature, press key . The time display in the display changes to centrigrade and the temperature to 70° C.
4. Set the desired core temperature to between 30 and 99° C using the keys or .

Recommended core temperatures for:

Roast beef		80° C
Roast beef or fillet of beef	very rare	45° C
Rare		50° C
Medium		60° C
Roast Pork		80 – 85° C
Roast lamb		70 – 75° C
Roast veal		75° C



The display shows the symbol of function, the set oven temperature (red), the symbol meat probe and the core temperature of the cooking food.
The increase of the core temperature is indicated in the display.

Check or correction

By pressing key it is possible to inquire the set core temperature and, if necessary, to correct it using the keys or . A 3-fold signal sound reports that the pre-set core temperature has been reached. Until all functions switch off automatically, a signal sound is repeated every 15 seconds, for approximately 2 minutes.

- Switch off signal sound and oven with key ○.

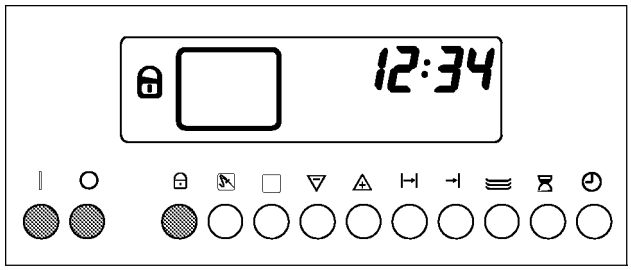
Child lock

The oven control can be protected against unintended switching on or adjusting by a safety lock. When the child lock activated, playing children cannot do any settings with the appliance, which may lead to endangering. Use this feature even with longer absence. The child lock can only be activated when the oven is switched off.

Activation of child lock

When the child lock is activated you have to press the key child lock simultaneously with the setting processes. This is also valid for corrections.

1. Press and keep pressed key, then press key and keep both keys pressed for approximately 4 seconds, until the display shows the symbol.



The display shows the symbol to show that the child lock is activated.

2. Switch off the appliance with key.

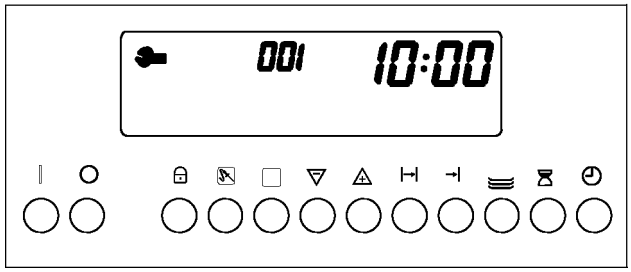
Deactivation of child lock

- Press keys and simultaneously until the symbol in the display goes out.

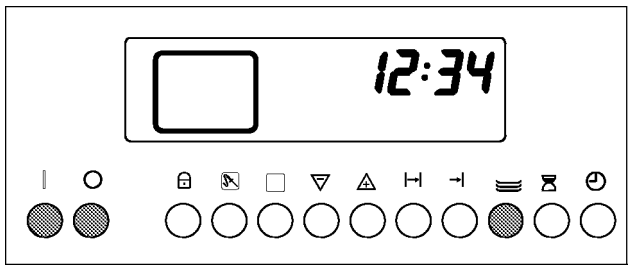
Service symbol

In case of malfunctions with the electronic control, the display indicates the service symbol and an error code instead of the temperature indication.

- Switch off the fuse. Switch the fuse on again after some minutes and try to switch on the oven. When the service symbol lights again, an error code is indicated.
- The cooling of the appliance is running continuously for safety reasons. If necessary, switch off the appliance again by the fuse.



5.3 Heatable drawer



You can preheat dishes in it.

1. Switch on the appliance with key ▯ and
2. the drawer heating with key ≡. Pilot lamp 12 is on.

The temperature is regulating automatically.

At the same time you can use an automatic programme; oven function and drawer heating are switched together.

3. Switch off the drawer heating with key ≡, or the drawer heating and appliance with key ○.

6. Technical equipment / general information

6.1 Fan after-running / appliance cooling

When the appliance has switched off, the housing fan continues operating, until the temperature has sunk below 200° C. In case of less than 200° C, the housing fan is running approx. 10 minutes. The remaining heat is indicated until the temperature has fallen to 40° C.

6.2 Setting time 4 seconds

After switching on and after all settings, the next setting step has to start within 4 seconds. The signal sound confirms the expiry of 4 seconds. By pressing the corresponding key you can produce the readiness for setting right away.

6.3 Safety switch-off of the oven

When setting function and temperature without a time limit, the safety switch-off switches off the oven automatically, depending on the set temperature.

- with temperature setting to 120° C after 12 hours
- with temperature setting to 230° C after 6 hours.

7. Fault diagnosis / What to do when ...?

7.1 Problems when baking

Problem	Possible cause	Measure
Baking or frying good is not swelling up properly	wrong temperature setting	Check the set temperature in accordance with the information from the table
baking or frying good does not get brown	temperature too low wrong material of baking tins	Increase temperature setting. Check the cooking condition, possibly reduce time. Use only dark baking tins with upper/lower heat.
baking or frying good gets too dark	temperature too high	Check the set temperature in accordance with the information from the table; if necessary, reduce temperature and increase time.
baking good gets too dry	baking duration too long because of a too low temperature	Check the set temperature in accordance with the information from the table; if necessary increase temperature and reduce time.
baking good is too damp	due to a too high temperature enough moisture could not be baked thoroughly Too much liquid in the dough.	Set the lower temperature value of the table. Prepare dough with less liquid.

7.2 Measures in case of malfunctions

Problem	Possible cause	Measure
The oven does not function.	malfunction in power supply	check fuses
The oven does not get warm despite switched-on function and temperature.	automatic programme was set with a later cooking start	cancel automatic settings of the electronic timer or set them anew
Oven lighting does not function.	bulb is defective	exchange bulb
Meat probe does not function.	not plugged in correctly or defective	check the plug-in contact
Service symbol lights.	depending on error code	inform the after-sales service
The time of day is flashing in the electronic timer.	power failure	set time of day

7.3 Service test

Test routines and their use

The control is equipped with several test routines which can be run partly manually or are running automatically in the background.

Safety switch-off

The appliance is equipped with a safety switch-off which leads to an independent switch-off of the appliance, when with different temperature settings the assigned time intervals are exceeded without any changes of functions or temperature.

Examples: up to 250 °C 3 h
up to 230 °C 6 h
up to 120 °C 12 h

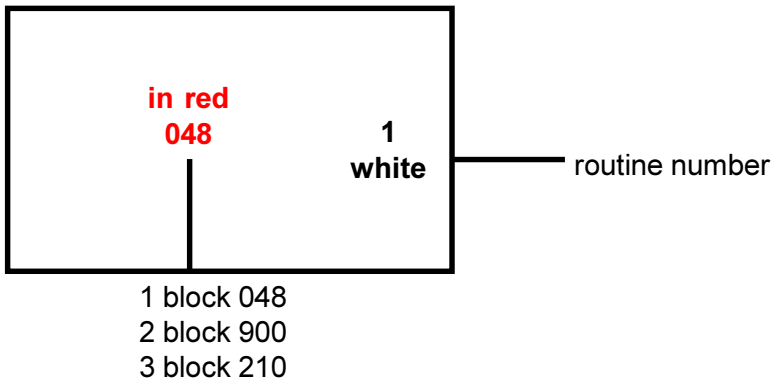
Service test

The manual test system of the control is composed of 6 test routines. To have access to these 6 test routines, the control must be in an error mode and indicate the current error, or the time has to flash. This will be achieved, when voltage is applied to directly. When it is necessary to have access to the test routines during operation, the appliance must be disconnected from the mains for at least 1 0 seconds.

Basic setting

1 Time is flashing or current error is indicated.
2 Keep key minute minder and key 1 pressed simultaneously for 5 sec.
3 The display shows the routine number at the right, which can be set from 1-6 using the key minute minder. If the routine number has been pre-selected and no entry is made within 5 sec., the control switches to the pre-selected test routine.
4 If a test routine has been carried out, this routine can be left by actuating the OFF key.
5 Switching on a test routine, see 1.

Routine 1



The code of 9 digits, which appears in 3 blocks of 3 digits one after the other, is the version number of the appliance. This code informs about the product number of the appliance.

Example: Version 015 270 800 replace the zero as first digit by 9
315 270 800 this number must be identical with the nameplate

Routine 2 see basic setting 1 – 5

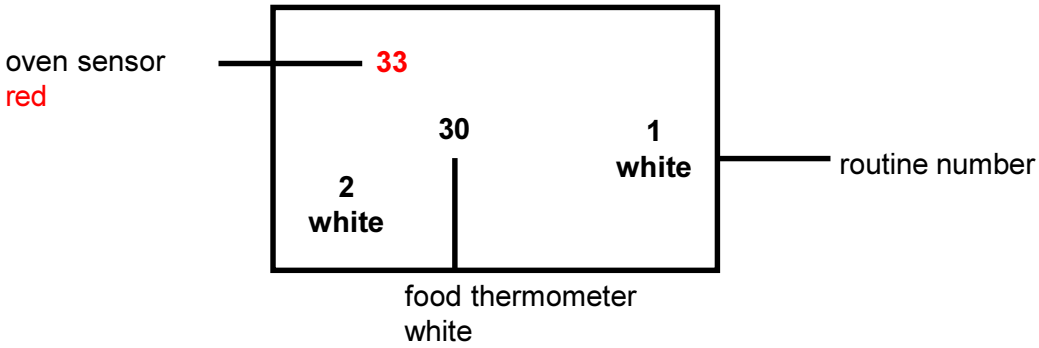
By pressing the minute minder key you can switch on resp. off the particular relays of the relay unit in this programme. By pressing the key **COOKING DURATION** and **COOKING END** simultaneously you can select the corresponding relay, max. 10, less depending on covering.

ATTENTION! The switching-on time **should be short**, as neither cooling fan nor hot air ventilator are running and too long switching-on times could lead to damages.

1	M2	fan		K61	approx. 100 mA
2		partial function steam	K62		
3	R 19	drawer heating		K63	approx. 1.5 A
4	R3	grill heating element		K64	approx. 4.5 A
5	M1	hot air		K65	approx.100 mA
6	R4	ring heating element		K66	approx. 6 A
7		no function	K67		
8		partial function steam	K68		
9	R2	lower heat		K69	approx. 2.8 A
10	R 1	upper heat		K70	approx. 3 A

There is no reliable declaration for the partial function steam (K62 + K68), of what is measured. These both relays had to react together. The oven ligthing is controlled via the main contactor. E4 and S1

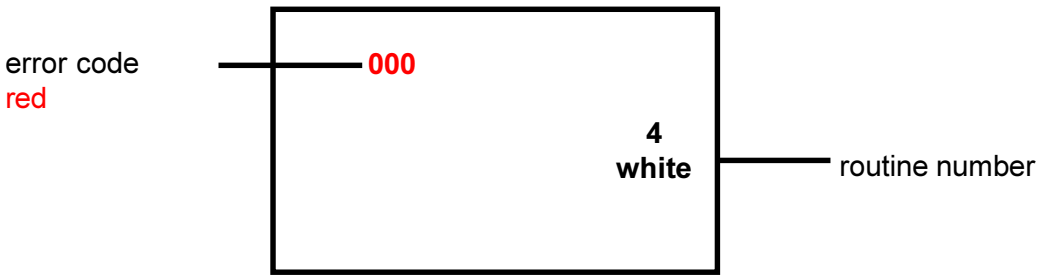
Routine 3 see basic setting 1 – 5



Routine 3 shows the temperature of oven sensor and food thermometer (if it is plugged in).

Note: Both temperatures normally differ, because there are different measuring points.

Routine 4 see basic setting 1 – 5



When the power supply is interrupted after the detection of the malfunction, the information is cancelled and with the execution of the test routine no. 4, the error code **000** appears. If a malfunction has been detected, but the reason for that malfunction does not exist any longer (passing malfunction), as the temperature dropped resp. the cooking thermometer was plugged off, the error code is noticed in the memory and, until the power supply is not interrupted, the respective error code can be read via the test routine no. 4.

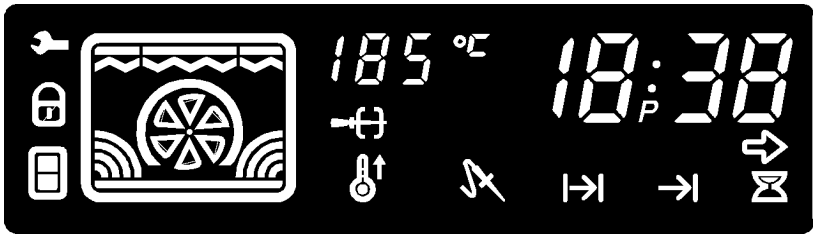
Error messages (routine 4)

Description of function:

If it is asked, this module handles all arisen faults and executes an EEPROM check. When a defect arises, an error register has access to the main loop of the processor control. This results in the control switching from the current state to the error mode (except when it is in the test mode). If a new fault arises, which has a higher priority than the previous one, only the new one (higher error code) is indicated. The last occurred fault with the highest priority is saved and can be indicated at any time by the service test mode 4. The defect with the highest priority is the EEPROM check error “F”.

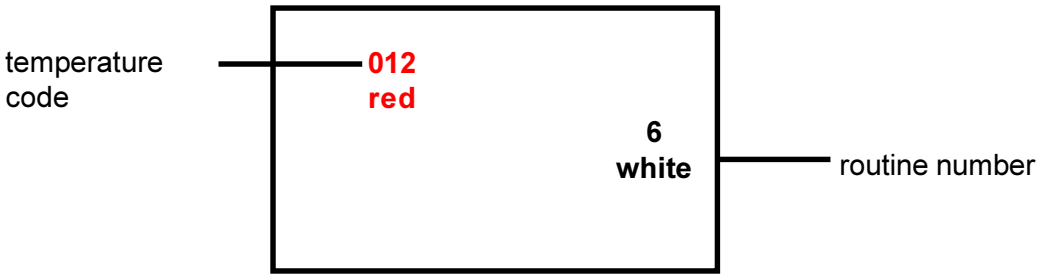
Error code	**Type of malfunction**
000	no malfunction
001	food thermometer open infinite ohm
002	food thermometer short circuit 0 ohm
003	Arises when trying to switch on again the appliance despite the error code indication 002 resp. 003. Malfunction with the protective circuit.
004	Arises when the child lock is to be switched on, but the circuit is defective.
005	not covered
006	The temperature measured by the oven sensor exceeds that temperature which is set by the programming device.
007	Further checks of cooking cabinet probe and the display board probe, except disconnection and short circuit (checking error)
008	Temperature limiter with the board has triggered off.
009	Temperature limiter with the board is short-circuited.
00 A	Temperature limiter with the board is open.
00 B	not covered
00 C	not covered
00 D	oven sensor short-circuited
00 E	oven sensor disconnected
00 F	EEPROM error (microprocessor)

Routine 5 see basic setting 1 – 5



This routine starts a run-through in the display, where all symbols and particular bars of the 7-segment display are test.

Routine 6 see basic setting 1 – 5



This routine shows the temperature, which is measured by the limiter on the central unit, in a hexadecimal code (see tables).

HEX	Temperature limiter control unit
OO1	-30
OO2	-25
OO3	-15
OO4	-10
OO6	- 5
OO7	0
OO9	5
OOB	10
OOE	15
O12	20
O16	25
O1A	30
O2O	35
O26	38
O2C	45

HEX	Temperature limiter control unit
O34	52
O3C	55
O45	60
O4E	65
O58	70
O62	75
O6C	80
O76	85
O80	90
O8A	95
O93	100
O9C	105
OA4	110
OAC	115
OB3	120

Trouble shooting

The trouble shooting is eased by error code test routines.
Troubles, which do not represent a direct danger for the user, are not detected by the control, e.g. disconnected heating elements. Despite this test routines are a help for the trouble shooting, even in the case they do not detect the malfunction.

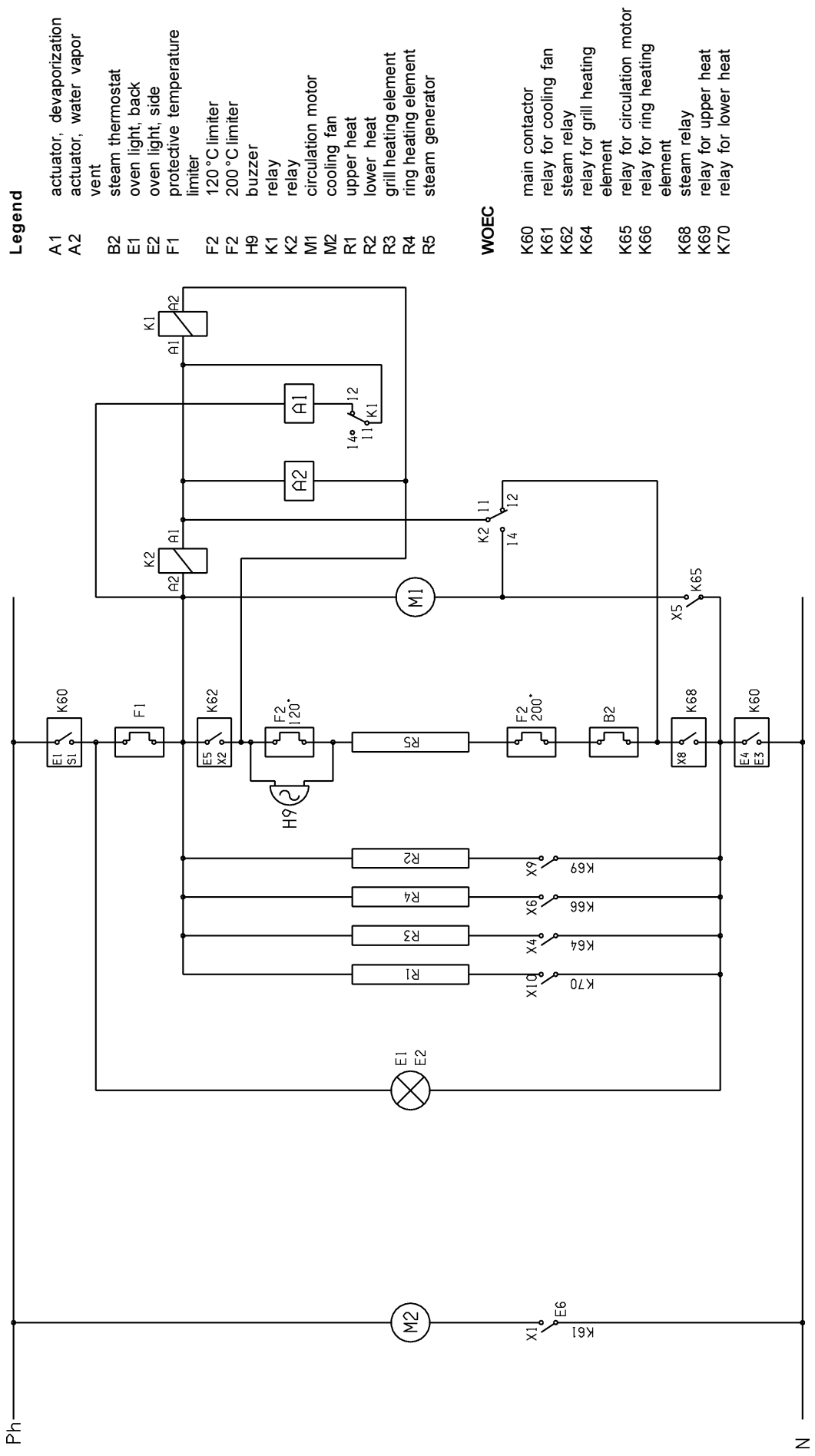
Trouble shooting using the error code

Error code	Type of malfunction
000	no malfunction detected
001	exchange food thermometer
002	check cable connection of food thermometer
003	exchange food thermometer
004	check cable connection of food thermometer - disconnect power supply and execute test routine 4 for trouble shooting - exchange power board
005	code not covered
006	Start test routine 2 for checking the relays, as the over-temperature may be caused by a jamming of the relay contacts of a heating element supply relay. - possibly exchange power board.
007	- exchange oven sensor - exchange display board
008	- Start test routine 2 for checking the relay of the circulation fan, as the over-temperature may be caused by a defect of the circulating air ventilator. - Check the perfect operation of the relay concerned; if it is defective, exchange the power board. - check the wiring of the circulating air ventilator - exchange circulation fan.
009 00A	exchange control unit board including display
00B 00C	- code not covered
00D	- check wiring of the oven sensor
00E	- exchange oven sensor
00F	- exchange control unit board including display

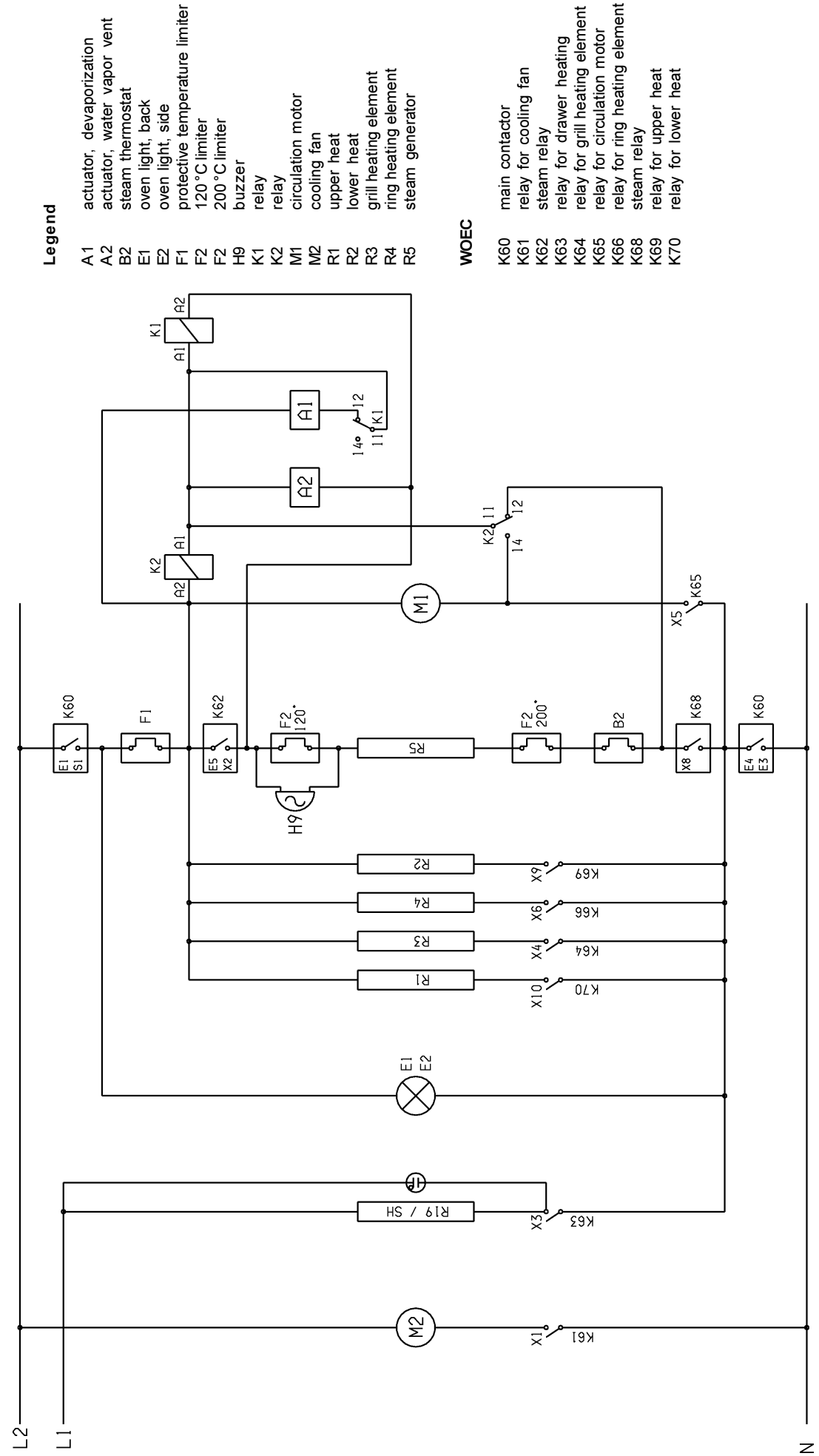
NOTE ! The error code 003 can also arise with a wrong switching sequence. To reset to normal operation, first press key O and then key **I**.

8. Technical information / wiring diagrams

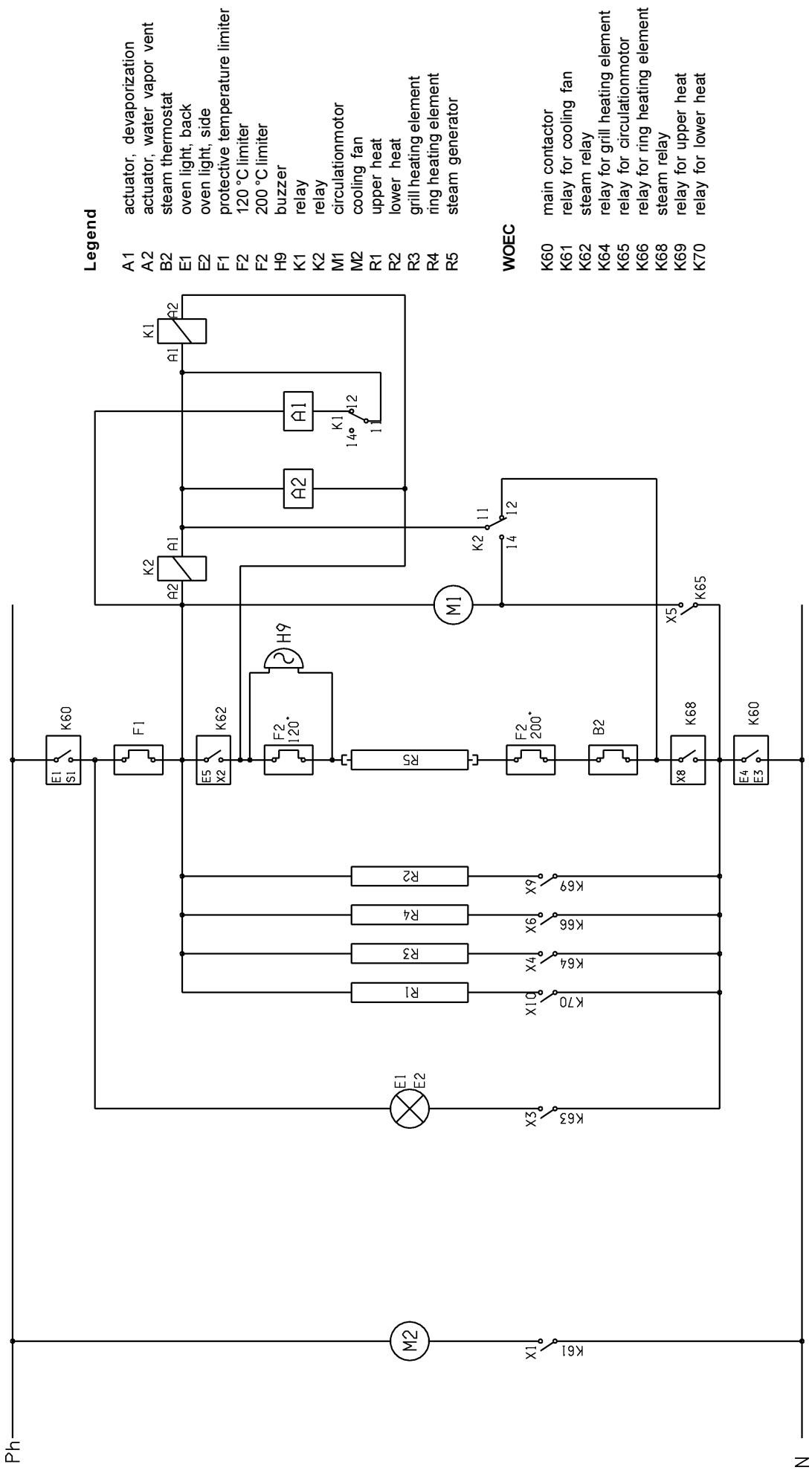
8.1 Electrolux Therma, 230 V, without drawer heating



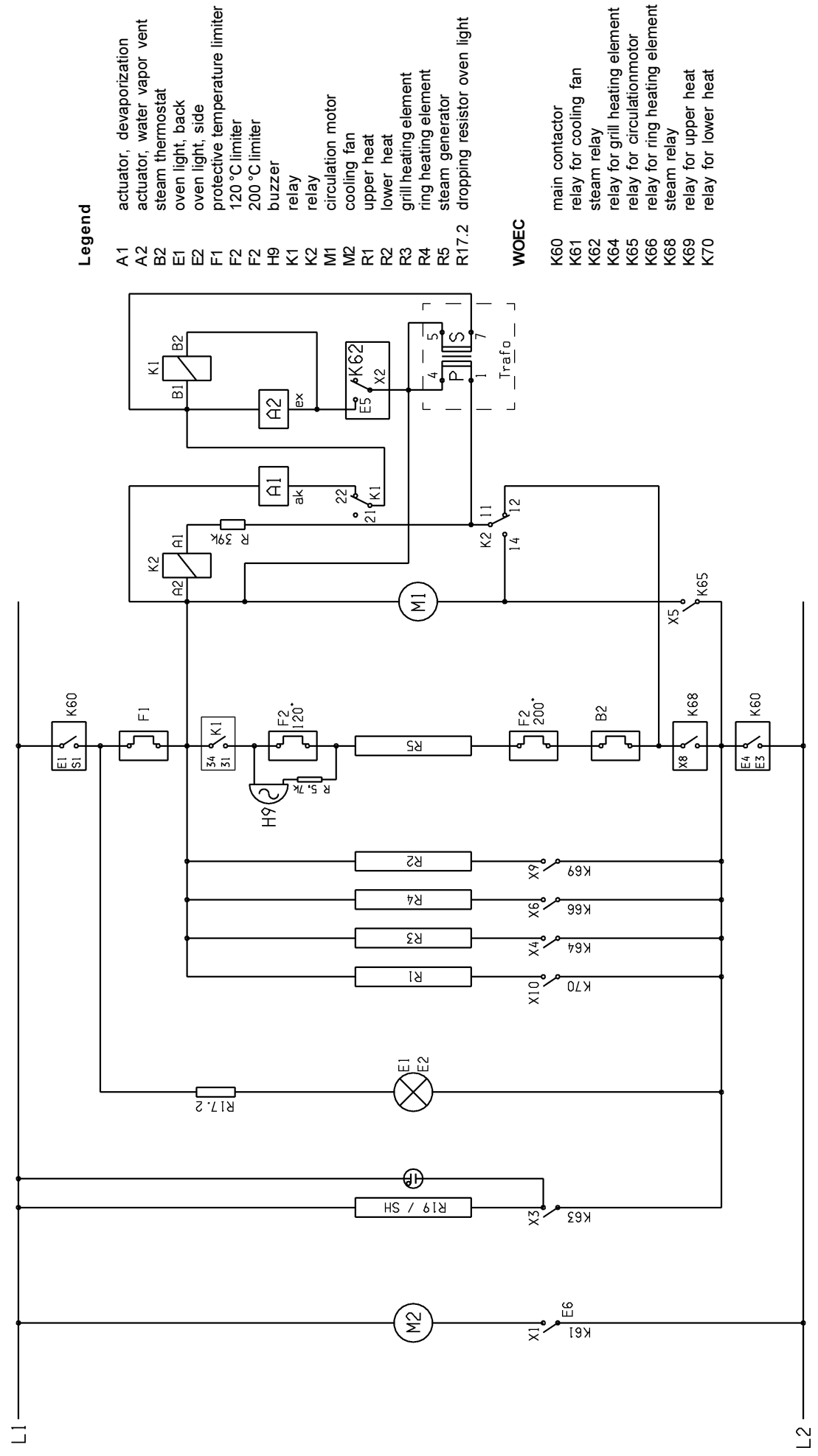
8.2 Electrolux Therma, 230 V, with drawer heating



8.3 Husqvarna, 230 V, with oven lights which can be switched off separately



8.4 Electrolux Therma, 400 V, with drawer heating



8.5 Description of function

After switching on, the relay K60 closes and the display shows the oven symbol. At the same time the oven lighting goes on.
The cooling fan (relay K61) is switched on with a delay of three minutes.

After selecting the functions, following relays are active:

steam cooking	K 68, K 62	K 69 below 80°C (K1,K2)
interval cooking	K 68, K 62, K 65, K 66	K 68 and K 65 alternating (K1,K2)
hot air	K 66, K 65	K 69 during heating phase
pizza level	K 66, K 65, K 69	
turbo grill	K 64, K 65	
infrared grill	K 64	
large area grill	K 64, K 70	
UH/LH	K 69, K 70	
drying	K 70, K 65	K 70 clocks
lower temperature cooking	K 66, K 65	K 69 during heating phase

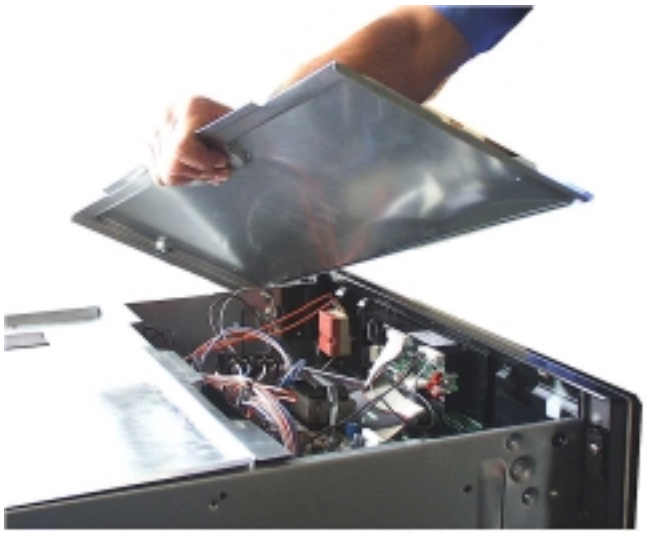
K1 and K2: These two relays are used to select the actuators. When switching on a steam function, the actuator A2 is applied to 230 volt and the steam vent closes (K1 and K2 under voltage). 5 minutes before the end of the steam cooking, both relays K1 and K2 are switching. The actuator A2 is without voltage and the steam vent opens. The actuator A1 is now connected with 230 volt and opens the devaporization valve. After the time programme has run down, all steam components are without voltage again.

9. Service information

9.1 Removing the two-part casing cover

Unscrew both fixing screws right and left.

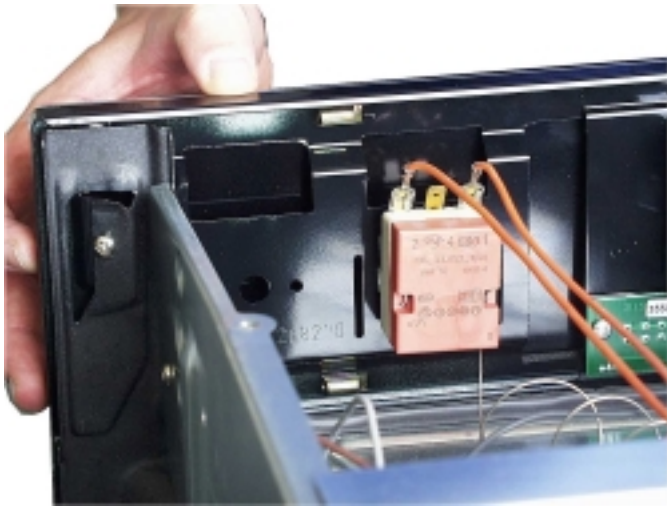
Take off the front half of the cover.

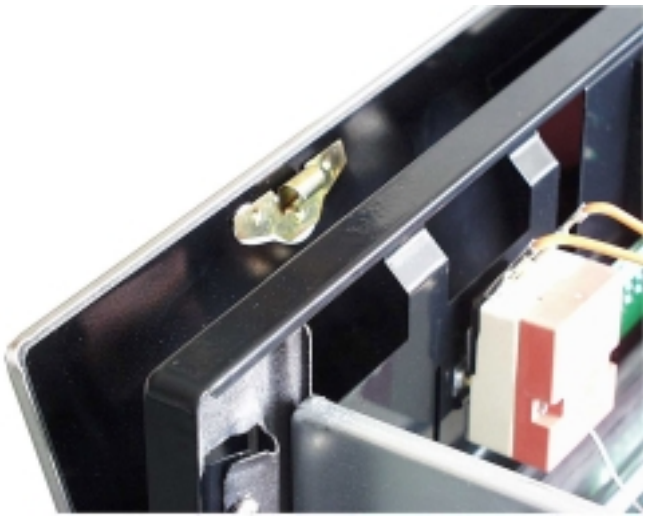


9.2 Disassembly of switch panel

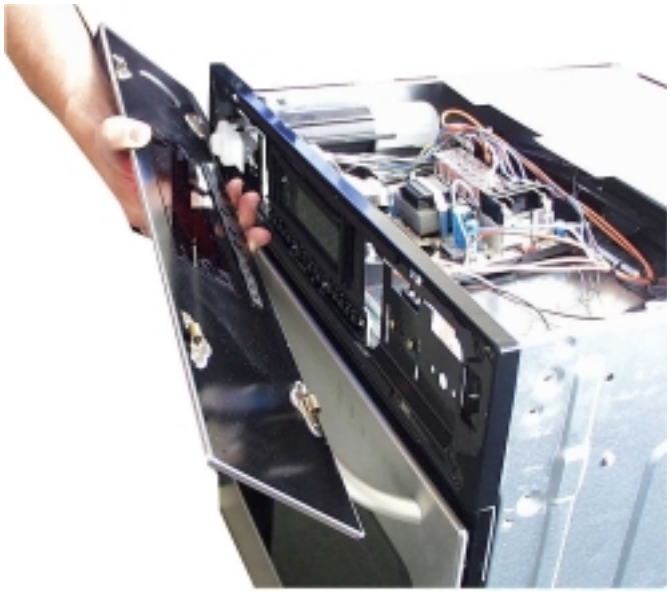
Draw off the clipped handle of the water drawer.

The switch panel is fixed by four springs, two each at the right and left side of the panel support.



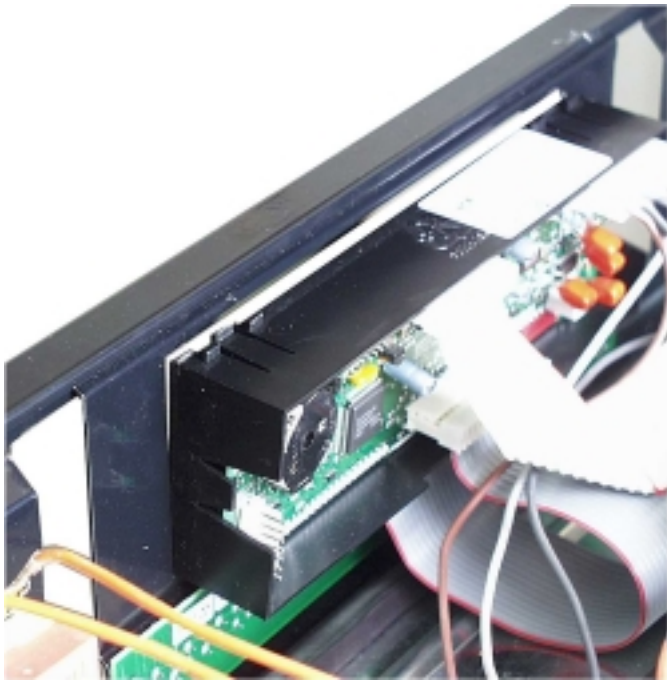


Grasp the switch panel right and left and draw it off horizontally.

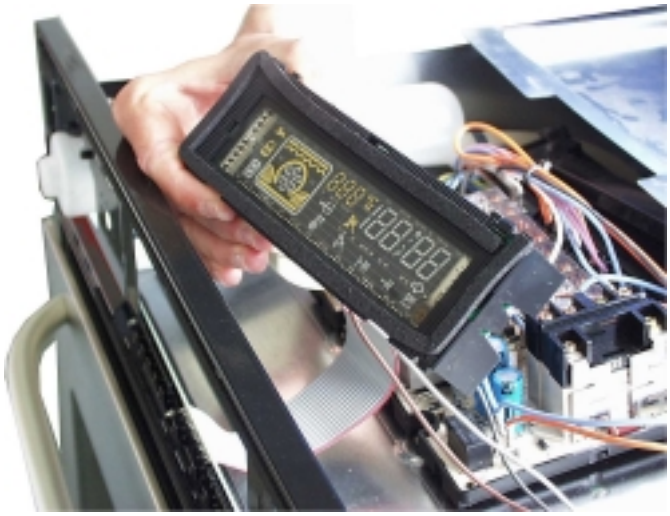


9.3 Disassembly of WOEC control unit

The WOEC control unit is hinged at the bottom at the panel support and fixed by two locking hooks at the upper side right and left each.

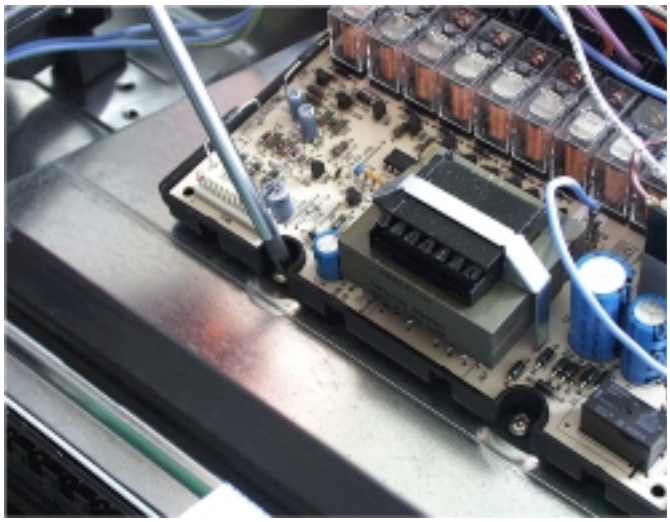


Press both locking hooks down carefully and lift them out from the panel support towards the inside of the appliance.

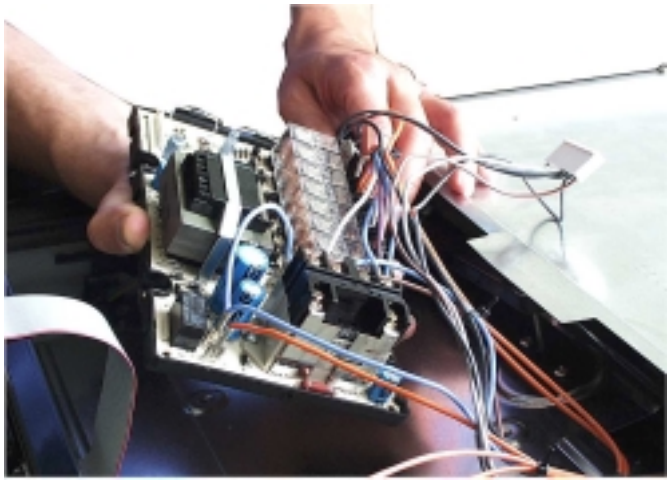


9.4 Disassembly of power supply

Unscrew the four fixing screws.

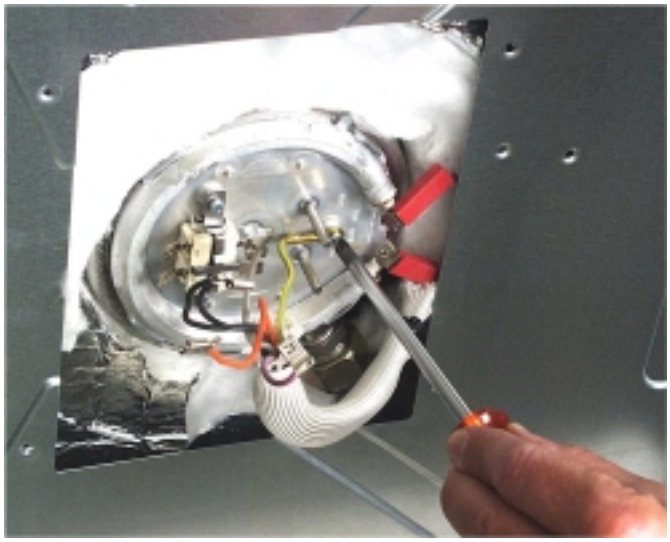


After you have drawn off the lines it is possible to remove the power supply from the inside of the appliance.

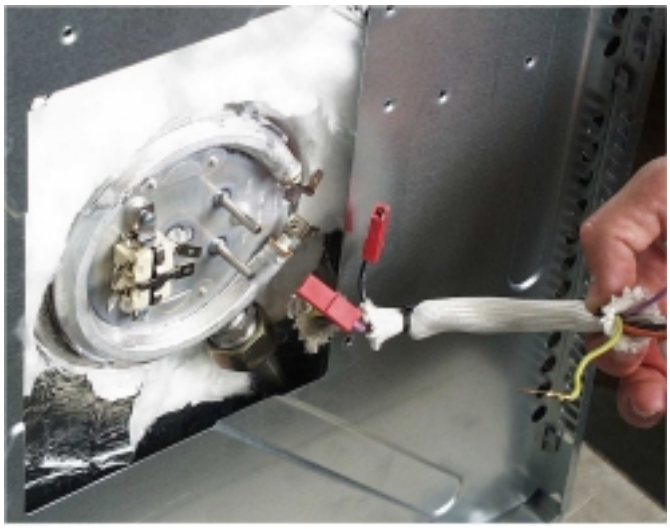


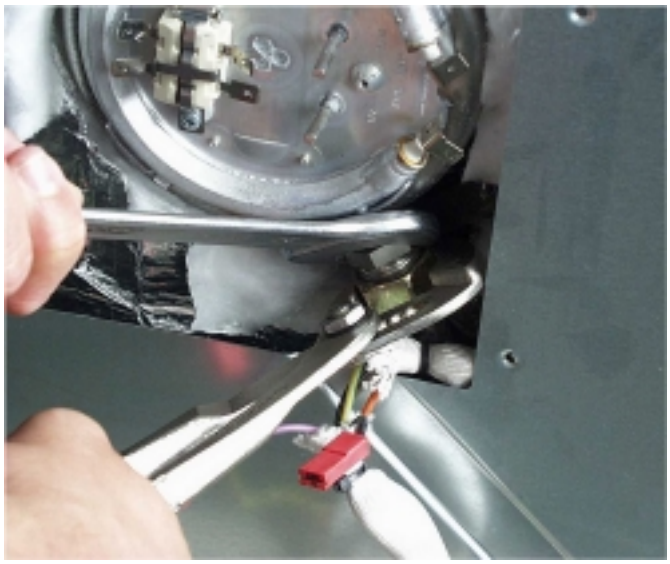
9.5 Disassembly of steam generator

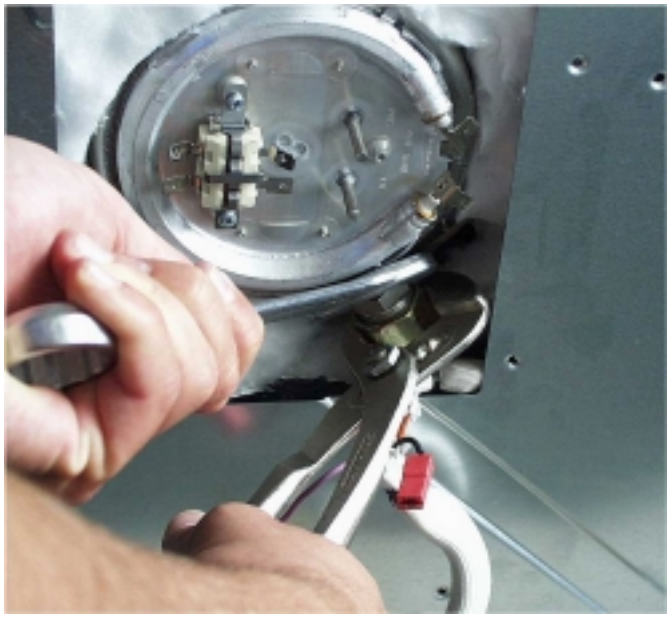
At the bottom side of the oven there is a service opening for the disassembly of the steam generator, which can be opened by removing the four fixing screws.



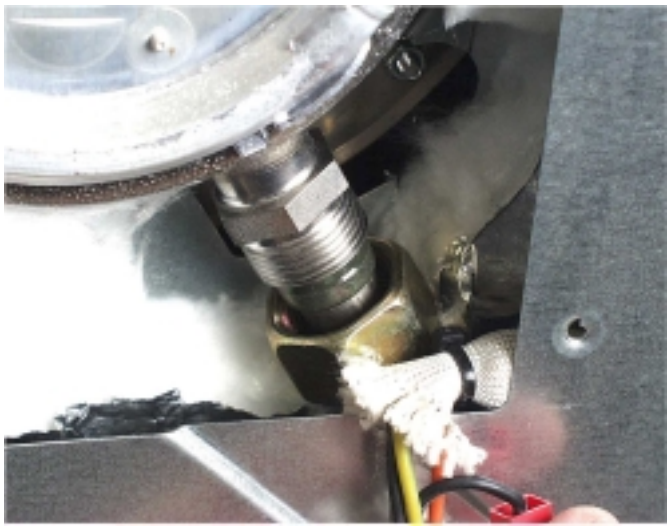
Loosen the ground wire connection and draw off the lines of both Klixons and the heating element.



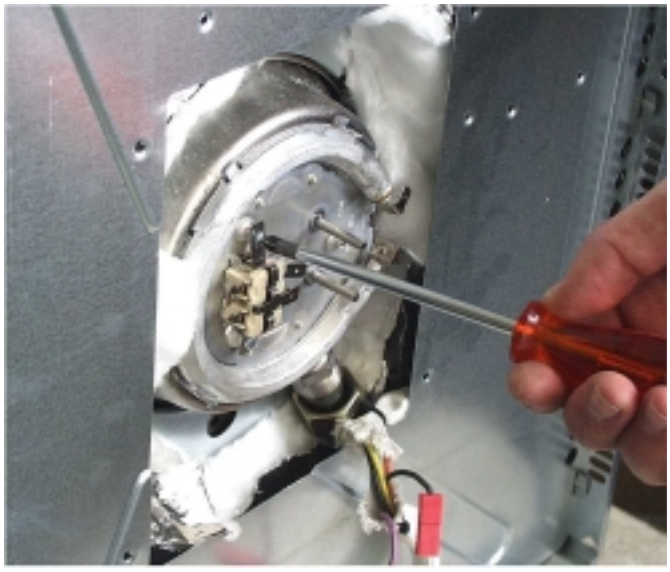




Remove the water inlet at the steam generator.

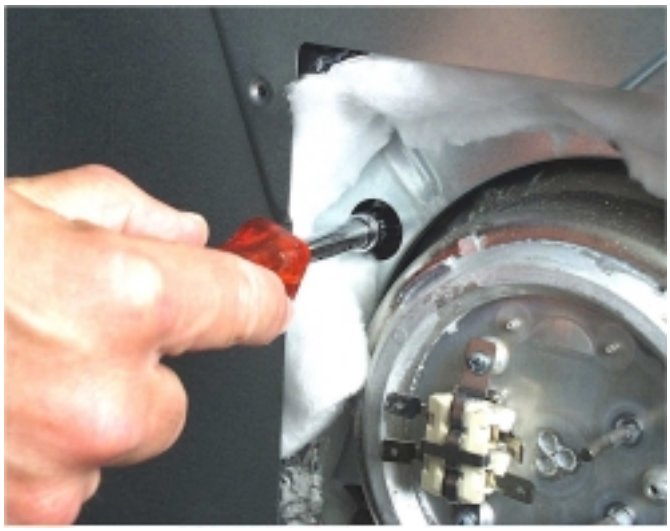


Disassemble both Klixons by removing the upper and lower fixing screw.

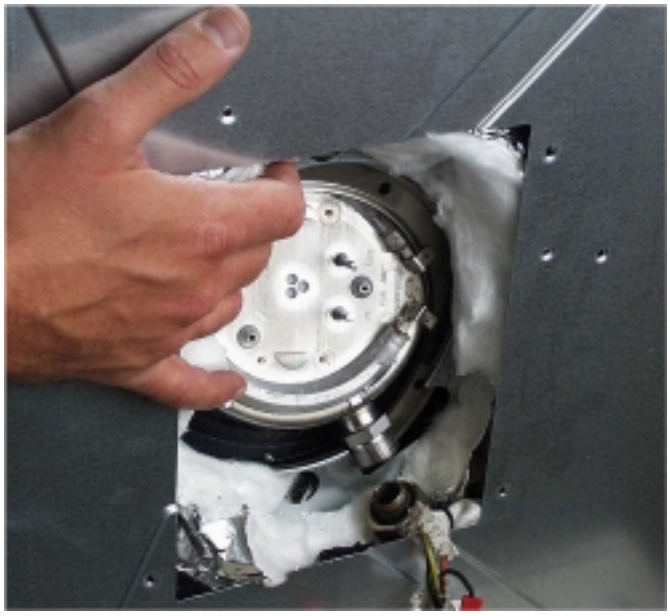


In the oven muffle there are six boreholes, through which the stud bolts being at the steam generator are stuck. The steam generator is fixed firmly by means of a bolster and six hex nuts.

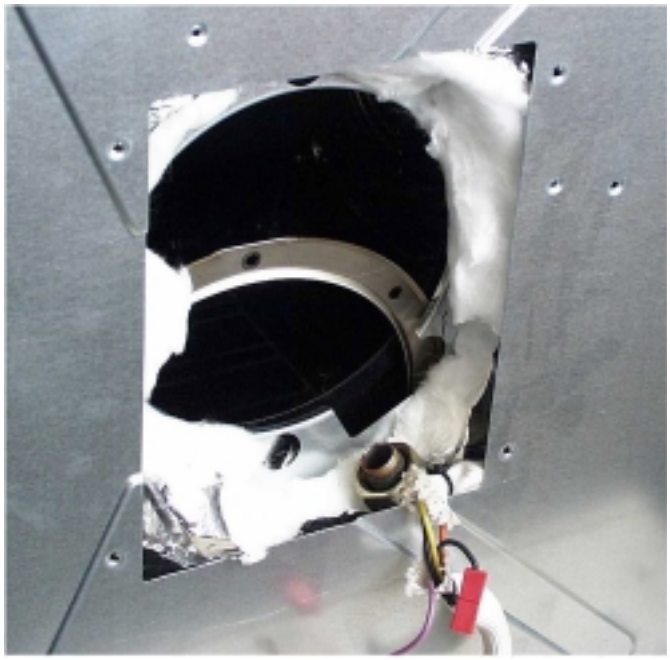
Unscrew the six fixing screws.



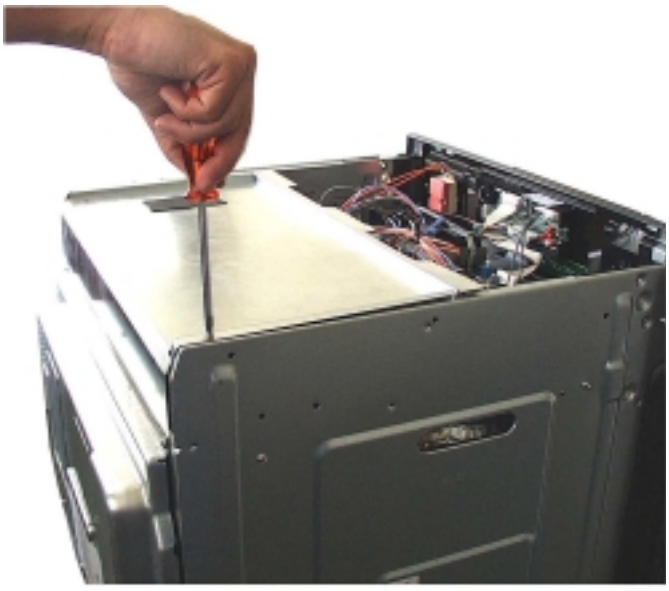
Loosen the fixed position by hitting firmly on the bottom of the steam generator with a rubber hammer.



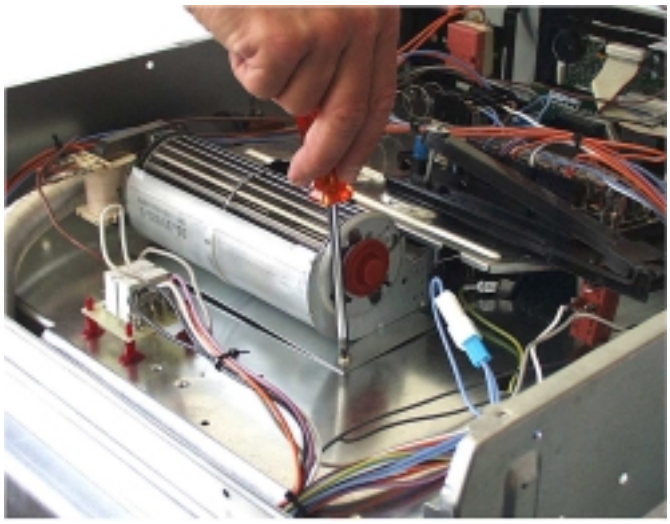
Now the steam generator can be removed towards the oven cave.



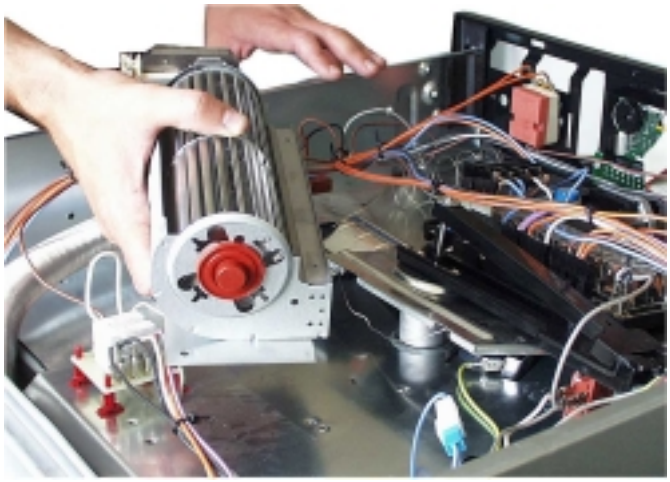
9.6 Disassembly of temperature sensor / steam thermostat

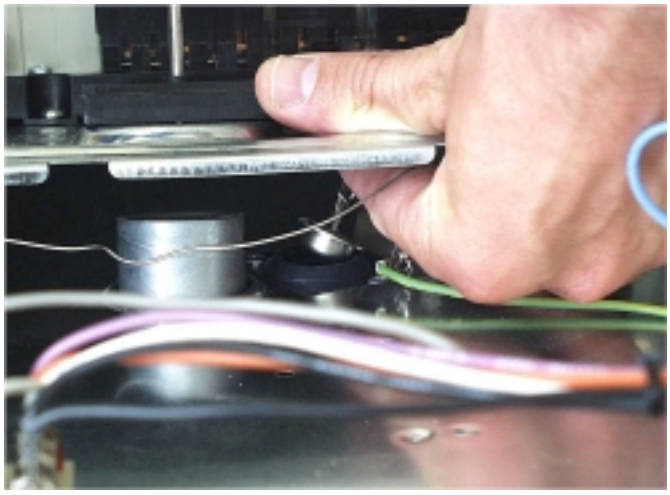


Remove the back casing cover by unscrewing the fixing screws.



Disassemble the cooling fan by removing the right and left fixing screws.





The seat of the temperature sensor is below the air duct next to the steam valve.
It is held by a rubber collar, from which it can be removed without disassembling further components.

9.7 Further information

- As with the necessary mechanical processes there is the danger of injury by sharp sheet metal parts, it is recommended to put on safety gloves.

- When you get a spare part with new seals when exchanging defective components, it is absolutely necessary to exchange these seals too.

- The installation of the appliance (assembly and electric connection) is only to be made through specialised stuff.

- The utmost caution is advised when opening the oven door to check the cooking food during steam cooking, as hot and damp steam will leave the cave when opening the door.

  Attention! With interventions in the appliance observe the safety rules!

9.8 ESD – electrostatic discharge and its effect on the control

As the interface of the control unit is open, the service technician, in case of a repair, has to pay attention that there will be a balance of potential via the casing of the appliance (touch it) to neutralise possible charges and not to damage the control unit. The same attention has to be paid to the service control which should only be taken from its ESD protective foil, after there was also a balance of potential at the appliance, before assembling the unit.

Note:
This is not to inform on the theoretic backgrounds of charging and discharging processes – they are simply not interesting in this case. The practical effects are more important. We can experience (feel) them every day, when there is a charge balance if touching a door handle.

What happens during a charge balance with the semiconductor components (part of an electronic assembly)?

The charge balance occurs via the inner structures of the component. A component must not necessarily be damaged immediately; much worse are possible later failures due to damaged inner connections which arise only when loaded by temperature or power.

On the one hand, however, almost all sensitive semiconductor components (e.g. MOS circuits) have been improved by integrated protective measures, on the other hand the inner structures of such parts are today essentially smaller than, for example, 10 years ago, which in turn increases their sensitivity.

Attention:
Which components are endangered in case of services?
All components which have checking / control inputs (door switch, food thermometer ...), open conductor paths and free accessible processors.

Concrete examples:
- timers with inputs for food thermometer and door switch
- timers, the control processors of which can be touched (for reasons of cost casing only formed as half shell)
- WOEC control unit